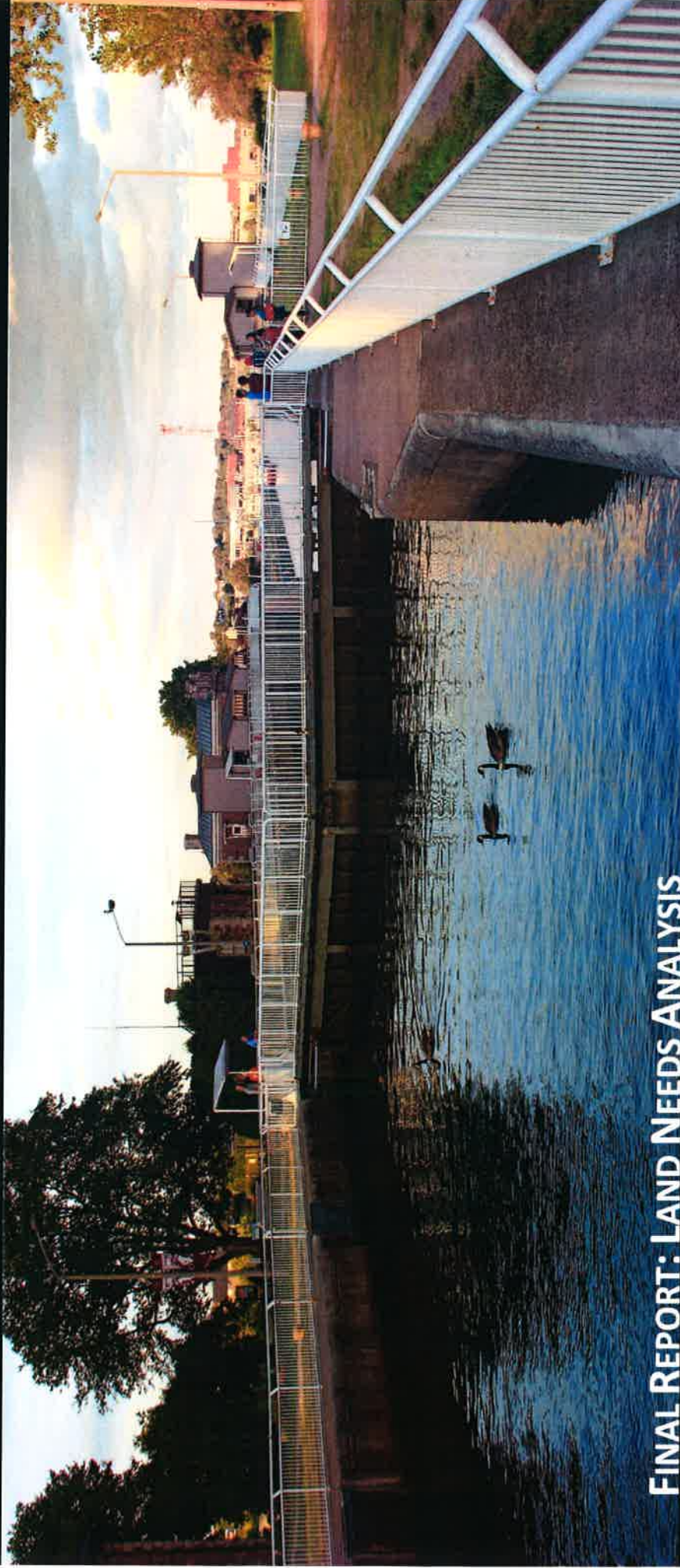


AECOM

Appendix A

Population and Waste Quantity Projections

The City of Sault Ste. Marie
Population, Housing and Employment Projections – Commercial and Industrial Land Needs Analysis



FINAL REPORT: LAND NEEDS ANALYSIS

September 25, 2018



1 Introduction to this Report

This report provides an analysis and discussion of the population, housing and employment projections for Sault Ste. Marie and how this translates into the demand for land in the City. This includes determining the land needs for residential, commercial, institutional and major employment lands and will be used to inform the City's update to its Official Plan. As

defined by the 2014 Provincial Policy Statement (PPS), a comprehensive review for an Official Plan means a review based on population and employment projections and how best to accommodate development while protecting provincial interests. The report includes the following:

1

Population Forecast

This forecast was prepared and then updated by metroeconomists to reflect the recently released 2016 Census. The working assumptions behind the population forecast are explained.

2

Projected Land Needs

The projected land needs analysis relies on the forecasts as an input. It factors in OP policy direction and statistics from the City, as well as growth assumptions from the planning team. This calculation is for residential, commercial (excluding retail trade), institutional and major employment.

3

Retail Trade

This section determines the spending of households in the primary and secondary trade areas to identify the projected land needs when looking at goods sales. The work for this methodology is described in full.

2 metroeconomics Population Forecast

In developing the projections, we used our proprietary sub-provincial projection system that integrates expectations regarding both the economic and demographic prospects of the area. The projections developed here consider the potential for employment growth in those industries that define its economic base, and the potential for supplying enough workers to fill those jobs.

The potential for employment growth is assessed against the backdrop of national and provincial trends in employment by industry. The potential for labour force growth takes into account such factors as the aging-in-place and gradual retirement of the Baby Boom generation and the need for the recruitment of new workers to replace the retiring Boomers and to fill the new jobs expected to be created.

2.1 The Sault Ste. Marie Metropolitan Area

Statistics Canada defines some 150 or so metropolitan areas across the country. Census Metropolitan Areas, or CMAs, consist of a group of contiguous municipalities (CSDs) with a core city of 100,000-plus people. Census Agglomerations, or CAs, are similar to CMAs but they are less populated and have a core city of between 10,000 and 100,000 people. The municipalities defining each CMA and CA exhibit a high degree of economic and social interdependence as revealed through commuting, shopping, and recreation travel patterns.

Statistics Canada defines the Sault Ste. Marie Census Agglomeration (CA) (population of 78,159 in 2016) as being the City of Sault Ste. Marie (73,368) plus MacDonald, Aberdeen and Meredith Township (1,609), Laird Township (1,047), Prince Township (1,070), Garden River First Nations Reserve (1,125) and Rankin Location Batchewana First Nations Reserve (population not reported). **Figure 1** provides a map of the Sault Ste. Marie CA which StatCan refers to as CA 590 (components of the CA fall within the shaded grey outline).

In carrying out projections for a City such as Sault Ste. Marie – that is for one which is the core municipality of a CA – we would typically start with projections for the CA as a whole followed by projections for the City. But because the City in this case, for all intents and

purposes, defines the CA – accounting for 94 percent of its population and 98 percent of its jobs – we have developed projections for the City only.

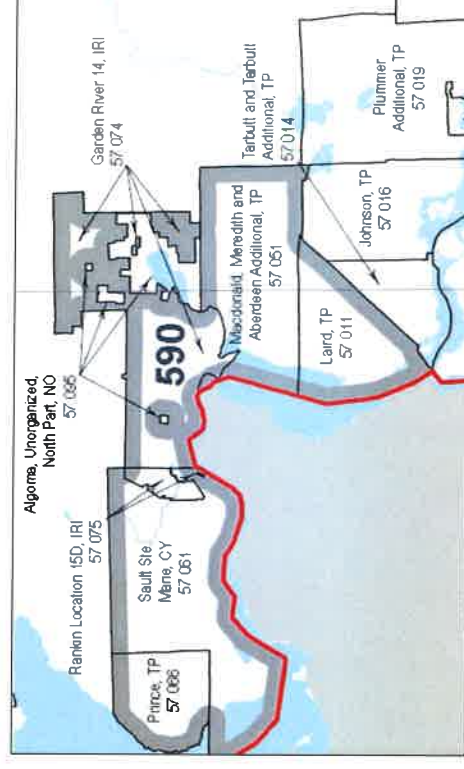


Figure 1: Map of the Sault Ste. Marie Census Agglomeration
Source: Statistics Canada

2.2 Defining Sault Ste. Marie's Economic Base

Drawing on Census 2016 data regarding employment by place-of-work by industry and using a procedure known as location quotient assessment we decomposed jobs in Sault Ste. Marie into those that define its economic base and those that serve the local population (**Table 1**). Economic base (EB) jobs provide goods and services primarily to people and businesses outside of the reference metropolitan area while community base (CB) jobs provide services primarily to the local population. Jobs in each metropolitan area are decomposed into their EB and CB parts as follows: (a) primary and manufacturing jobs are assumed to primarily produce for markets outside of the metro area; (b) jobs in service industries that exceed the norm per capita are assumed to primarily produce for markets

outside of the metro area (hence that portion of those service industries is said to be producing tradable services).

Economic base (EB) industries are considered to be those that drive overall growth:

- Agriculture, mining, and manufacturing;
- Exportable services (higher order education, health care, business services); and,
- Tourism services (retail sales, accommodation, food, recreation, entertainment).

Without economic base growth overall growth typically will not occur:

- EB growth drives employment and population growth;
- Population growth drives community base (CB) growth; and,
- CB growth drives additional population growth.

In **Table 1** the “norms per capita” are developed by comparing jobs per 1,000 persons by industry in Sault Ste. Marie to jobs per 1,000 persons by industry province-wide. Where the City’s jobs per persons ratio exceeds that of the province in the service industries, it is assumed the excess number represent workers producing services in the City for non-residents. For example, the City’s ratio for health and social services at 71 jobs per 1,000 people is much higher than the provincial average of 51. The difference – 20 jobs per 1,000 residents or 1,523 jobs out of a total of 5,410 jobs in health and social services – reflects services being provided to people coming to the City from the surrounding area where such services are not available in order to obtain such services. In a similar vein, there are “excess” jobs in retail trade and in accommodation and food indicating the City is serving as a regional centre for these services as well. The total employment by place of work per 1,000 residents is greater in Sault Ste. Marie than the provincial average as Sault Ste. Marie is a self-contained metropolitan area. While Ontario’s population mostly lives in metropolitan areas, the provincial average takes into account rural areas. Sault Ste. Marie has no rural areas included in its employment base and therefore produces a higher number than the province.

Population and employment by industry	Ontario		Sault Ste. Marie		Sault Ste. Marie		SSM EB%
	Employed	/ 1,000	Employed	/ 1,000	EB	CB	
Total population	13,448,494	---	73,368	---	---	---	---
Total employment by place-of-work	5,867,270	436	31,045	444	8,265	22,780	27
Agriculture, other primary	88,450	7	110	2	110	0	100
Mining, oil and gas	24,705	2	75	0	75	0	100
Utilities	43,785	3	310	4	55	255	18
Construction	213,400	16	1,015	19	232	783	23
Manufacturing	624,260	46	3,605	60	3,605	0	100
Wholesale trade	238,335	18	565	10	0	565	0
Retail trade	707,530	53	4,450	62	739	3,711	17
Transportation, warehousing	232,090	17	955	13	0	955	0
Information, culture	153,455	11	360	4	0	360	0
Finance, insurance	483,235	36	1,355	19	0	1,355	0
Professional, scientific, technical services	497,790	37	1,110	16	0	1,110	0
Other business services	234,280	17	1,745	23	430	1,315	25
Education	460,690	34	2,460	34	0	2,460	0
Health, social services	680,110	51	5,410	71	1,523	3,887	28
Arts, entertainment, recreation	119,330	9	1,125	16	513	612	46
Accommodation, food	420,400	31	2,630	31	0	2,630	0
Other services	257,000	19	1,215	18	0	1,215	0
Government	398,425	29	2,550	42	983	1,567	39

Table 1: Economic Base and Community Base Jobs in Sault Ste. Marie in 2016
Source: Statistics Canada and metroeconomics

Table 1 reveals that 8,265 of the City’s 31,405 jobs in 2016 are considered to be economic base jobs or 27 percent. Within the economic base group (see the column indicated as EB under Sault Ste. Marie) the major industries are manufacturing (3,605 jobs); health and social services (1,523); tourism (total of 1,252 including 739 in retail and 513 in arts, entertainment and recreation); and government (983).

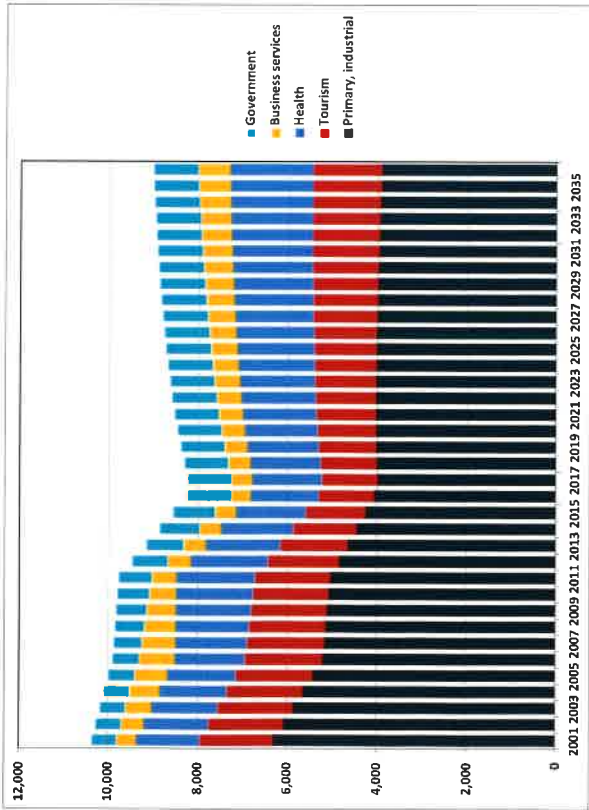


Figure 2: Economic Base Jobs in Sault Ste. Marie, 2001 to 2036
Source: Statistics Canada and metroeconomics

Sault Ste. Marie witnessed a decline in its economic base employment between 2001 and 2016 with the major losses occurring in manufacturing (Figure 2). Drawing on metroeconomics' projections for employment province-wide by industry, but reflecting the fact that Sault Ste. Marie has not kept pace with the province in the past; we project the City's EB jobs will increase from 8,265 in 2016 to 9,055 in 2036 with further declines in manufacturing employment offset by gains in health and social services, tourism and, less so, government. These past and projected future trends are summarized in Figure 2.

Assumptions Built into the metroeconomics Projection System

- Our projection system, like most others, includes a standard age-cohort model
- The model assumes future fertility rates by age of mother, mortality rates by age and gender and in- and out-migration shares by age and gender based on historical trends
- Future net in-migration is determined primarily by the future need for workers
- The future need for workers is determined by demand and supply conditions
- The demand for future workers is determined by the future growth of jobs
- The supply for future workers is determined by the share of those aged 20 to 69 who work
 - Several factors affect the number and share of people 20 to 69 who work:
 - Gross in- or out-migration flows of those aged 20 to 69 is the major factor
 - Rates of retirement at various age levels impact the share who work
 - Our projection system simultaneously captures these interdependent factors
- In our system, future net migration is primarily determined by future labour requirements (most other systems simply assume future flows of net in- or out-migration based on past trends)

Our approach simultaneously captures the impacts on the future population of a range of important factors including the changing economic environment, the aging of the Baby Boom Generation, improving rates of life expectancy, etc.

2.3 Sault Ste. Marie's Current and Future Population Base

Like all other communities across Canada, the City of Sault Ste. Marie's Baby Boomers stand out. This group – born between 1946 and 1966 – by 2016 was between the ages of 50 and 70. **Figure 3** indicates that persons aged 52 and over accounted for a greater share of the City's total population in 2016 (43.3 percent) than the province's total population (35.2 percent).

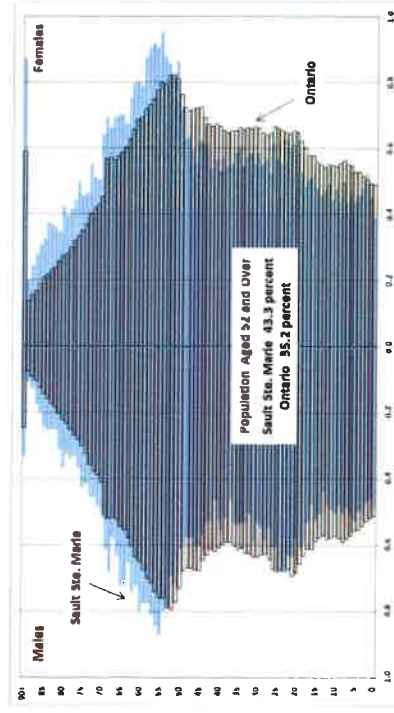


Figure 3: Population by Age and Gender as a Percent Share of the Total Population in 2016, Sault Ste. Marie and Ontario
Source: Statistics Canada

Over the next two decades, those among the Baby Boom generation who worked will retire. Most of them will remain as residents of the City until they pass away. That means they will continue to require local services, which in turn means the City's community base jobs will remain steady even as the Boomers retire. But the retiring Boomers will need to be replaced in the workforce. Since the Baby Boom generation did not fully replace itself – the total fertility rate has been well below the replacement rate of 2.1 children per female for decades – the positions the Boomers vacate throughout Canada and in Sault Ste. Marie will need to be filled by migrants.

Annual flows of positive net in-migration – most aged 20 to 40 years – will result in a growing population overall for the City. Their arrival, in turn will expand the need for additional community base employment in the City. This, in turn, will lead to further net in-

migration, etc., until the labour market is in balance. The Baby Boom retirement phenomenon will have a significant impact on population growth throughout Canada and in all of its communities including Sault Ste. Marie through to 2036.

The result is that the City's population will grow over the next two decades even though the City's economic base employment total will not reach its previous peak level between now and 2036 (as indicated earlier in **Figure 2**).

Our projections indicate that Sault Ste. Marie's total population will increase (all numbers in the text are rounded to the nearest 100) from 73,400 in 2016 to 83,300 by 2036 for a gain of 9,900. Persons aged 20 to 74 will increase from 51,200 to 55,000 or by 3,800 over that span while total employment will increase from 31,000 to 36,900 or by 5,900 overall. Thus the share of persons aged 20 to 74 who work will increase from 61.8 percent in 2016 to 66.8 percent in 2036 reflecting the expectation that many Baby Boomers will continue working beyond the age of 65. These trends are illustrated in **Figure 4**.

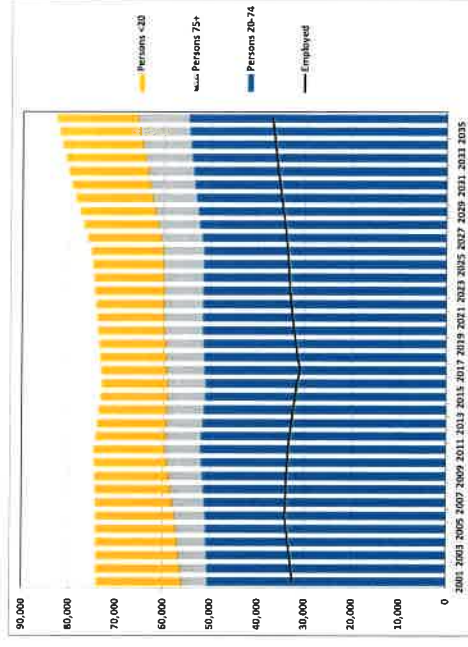


Figure 4: Sault Ste. Marie Population by Major Age-Group and Total Employment, 2001 to 2016 (Actual); 2017 to 2036 (Projected)
Source: Statistics Canada and metroeconomix

2.4 Summary of the Projections for Sault Ste. Marie

Table 2 on the following page provides details of the population, dwelling and employment projections for Sault Ste. Marie developed here. Key trends include the following:

- The City's total population will increase by about 9,900 between 2016 and 2036¹;
- Major age group gainers include:
 - persons under 15 (up 2,800);
 - persons 15 to 19 (up 700);
 - persons 35 to 44 (up 3,400);
 - persons 45 to 54 (up 1,000);
 - persons 75 and over (up 2,700);
 - persons 65 to 74 (up 1,500);
- The population aged 20 to 24 and 25 to 29 will hardly change; and,
- The population aged 55 to 64 will fall (down 2,200).

These unbalanced changes across the age spectrum are the result of the Baby Boomers aging in place (leading to population gains among those over 55) and the in-migration and aging in place of younger people and their offspring.

The population gains described above will result in the need for almost 4,000 new dwellings in the City over the next two decades. Most of these needs centre on single-detached units (up 2,600) and low and high rise apartments (up 900 combined). The average number of persons-per-unit will increase slightly from 2.25 in 2016 to 2.28 in 2036 since most of the new units will be needed to accommodate relatively young, family-oriented migrants to the community.

Employment by place of work by industry – including not only the economic base but also the community base jobs – will increase, as noted earlier, by about 5,900 between 2016 and 2036. The major gainers by industry include the following:

- Health and social services (up 1,200 employees);

- Construction (up 700 employees)
- Professional, scientific and technical services (up 600 employees);
- Other business services (up 1,000 employees);
- Education (up 600 employees);
- Accommodation and food (up 600 employees);
- Arts, entertainment, and recreation (up 600 employees);
- Wholesale trade and retail trade (each up 200 employees); and,
- Finance, insurance and real estate (up 200 employees).

All other categories will change by less than 100 except manufacturing which will decline by 300. Note that while manufacturing jobs are projected to decline (at an average annual rate of 0.4 percent), real GDP is expected to increase at an average annual rate of 1.0 percent. This occurs because manufacturing productivity will grow faster at 1.4 percent per year than output as manufacturing jobs continue to be threatened, but manufacturing output continues to be enhanced, by rapid rates of technological change and automation.

Technological change is also slowing the rates of job growth in other industries such as wholesale and retail trade, information and culture, and even government, industries that, like manufacturing, were once major sources of employment growth.

¹ The years 2016 and 2036 were used for the purposes of creating the forecast as they were reliant on the 2016 census data. The calculations continued until the year 2041, and the figures for 2018 and 2038 were then taken for the purposes of this exercise.

City of Sault Ste. Marie, Land Needs Analysis
Final Report

Table 2: Sault Ste. Marie Projections Summary: 2011 and 2016 (actual), 2021, 2026, 2031 and 2036 (projected)

	Annual Levels						2016-2036	
	2011	2016	2021	2026	2031	2036	Change	AAPC
Total population	75,190	73,415	74,574	75,734	79,978	83,318	9,903	0.7
5 year change	445	-1,775	1,159	1,159	4,245	3,339	9,903	-----
Sources of population change								
Births (5 year cumulative)	3,706	3,189	3,167	3,220	3,244	3,425	13,057	-----
Deaths (5 year cumulative)	3,976	4,474	4,922	5,162	5,381	5,681	21,146	-----
Net Natural (births less deaths)	-1,770	-1,285	-1,755	-1,941	-2,138	-2,255	-8,089	-----
Net migration (5 year cumulative)	1,215	-490	2,914	3,101	6,382	5,595	17,992	-----
Population by major age group	75,190	73,415	74,574	75,734	79,978	83,318	9,903	0.7
Persons 00-14	10,685	10,455	11,197	11,784	12,483	13,208	2,753	1.3
Persons 15-19	4,700	3,840	3,443	3,701	4,464	4,509	669	0.9
Persons 20-24	4,745	4,525	3,708	3,339	3,812	4,530	5	0.0
Persons 25-34	8,300	8,245	8,942	8,416	8,111	8,384	139	0.1
Persons 35-44	8,475	8,005	8,654	8,818	11,263	11,400	3,395	2.1
Persons 45-54	12,360	10,075	8,695	8,444	9,472	11,062	987	0.5
Persons 55-64	11,090	11,820	12,354	10,856	9,630	9,590	-2,230	-0.9
Persons 65-74	7,460	8,570	9,603	10,866	11,460	10,081	1,511	0.9
Persons 75+	7,375	7,880	7,977	8,508	9,283	10,554	2,674	1.7
Total dwellings	32,485	32,635	33,383	33,869	35,429	36,579	3,944	0.6
Single-detached	21,240	21,220	21,738	22,070	23,064	23,784	2,564	0.6
Semi-detached	1,975	1,840	1,877	1,898	1,992	2,061	221	0.6
Row house	955	970	991	997	1,043	1,093	123	0.6
Apartment, detached duplex	1,335	1,500	1,522	1,528	1,602	1,660	160	0.5
Apartment, building 5+ storeys	2,170	2,120	2,174	2,245	2,364	2,461	341	0.8
Apartment, building <5 storeys	4,810	4,875	4,972	5,019	5,246	5,398	523	0.5
Other single-attached house	0	100	98	101	109	114	14	0.7
Moveable dwelling	0	10	10	9	8	8	-2	-0.9
Persons per unit	2.31	2.25	2.23	2.24	2.26	2.28	0.03	-----
Total employed by place-of-work	33,405	31,045	32,715	33,654	35,435	36,938	5,893	0.9
Agriculture, forestry	120	110	97	88	79	70	-40	-1.8
Mining, oil and gas	25	75	79	82	85	87	12	0.8
Utilities	300	310	321	326	341	353	43	0.7
Construction	1,425	1,015	1,146	1,288	1,479	1,675	660	3.3
Manufacturing	4,520	3,605	3,639	3,490	3,416	3,232	-283	-0.4
Wholesale trade	760	585	660	687	737	780	215	1.9
Retail trade	4,695	4,450	4,478	4,475	4,584	4,627	177	0.2
Transportation, warehousing	965	955	985	1,002	1,054	1,095	140	0.7
Information, culture	320	360	351	335	330	321	-39	-0.5
Finance, insurance, real estate	1,435	1,355	1,417	1,430	1,490	1,531	176	0.6
Professional, scientific, technical services	1,205	1,110	1,271	1,390	1,566	1,740	630	2.8
Other business services	1,740	1,745	2,095	2,301	2,576	2,847	1,102	3.2
Education	2,565	2,460	2,697	2,754	2,912	3,042	582	1.2
Health, social services	5,325	5,410	5,826	6,030	6,373	6,659	1,249	1.2
Arts, entertainment, recreation	1,180	1,125	1,269	1,397	1,559	1,721	596	2.6
Accommodation, food	2,320	2,630	2,736	2,848	3,069	3,268	638	1.2
Other services	1,360	1,215	1,180	1,157	1,172	1,173	-42	-0.2
Government	3,155	2,550	2,567	2,569	2,613	2,628	78	0.2
GDP Total (\$2007 millions)	3,027	2,867	3,115	3,319	3,630	3,949	1,082	1.9
Manufacturing	537	475	501	525	548	570	95	1.0
All other industries	2,490	2,392	2,614	2,794	3,082	3,379	987	2.1

Source: Statistics Canada and metroeconomies

3 Projected Land Needs

The population numbers derived by metroeconomics are the first step in determining the land needs of Sault Ste. Marie. Once the population numbers were forecast, the planning team was then able to take the numbers and use them to calculate how the increase in population will impact the amount of land needed to accommodate the expected growth. The forecast uses the 2016 census and calculated growth up until 2036 as provided by metroeconomics in **Section 2**. The forecast also provided numbers continuing until 2041. To use numbers that are reflective of Sault Ste. Marie now, the numbers for 2018 and 2038 were taken from this forecast for the purpose of the projected land needs to demonstrate a 20 year planning horizon from the present year.

An important consideration when estimating growth is determining whether or not the City will be able to accommodate the estimated population increase. To do this, the planning

team converted these population numbers into dwelling units and employee numbers to determine how many additional dwellings would be needed and how much space would be required to accommodate future jobs. This was done using a detailed breakdown of the metroeconomics forecast numbers which showed employee numbers per year by industry and dwelling numbers per year.

The following sections describe the process used to conduct this residual land needs analysis for residential, commercial (excluding retail trade), institutional, and major employment uses. Each of these land use types was analysed to see whether there is enough land within the City to accommodate this projected growth. Analysis specific to commercial retail trade is detailed separately in **Section 4**.



3.1 Residential Land Needs

3.1.1 Method

The residential land needs analysis was drawn from the population and dwelling forecast for the years 2018 (32,968 dwellings) and 2038 (36,912 dwellings). The conversion of population to dwellings was based on persons per unit numbers as outlined in **Section 2**. The number of dwellings for 2018 was then subtracted from 2038 to create a total forecasted housing demand. This was calculated to be a change of 3,944 dwellings.

From the total housing demand, dwellings that would be developed as rural residential or as intensification units then needed to be subtracted to provide a settlement area greenfield housing demand number. To determine the number of dwellings which would be allocated to rural areas or at key intensification sites, the planning team referred to the City's Official Plan (OP). The OP does not provide an allocation percentage, or any other figures, which would indicate the placement of any future dwellings to intensification sites. The adjustment for intensification was therefore zero. As for rural allocation, Section 2.3.6 of the OP states there not more than 10% of new residential development should occur in rural areas. As this is the ceiling limit on rural allocation, 10% of forecasted dwellings were allocated to rural areas, meaning 394 rural lots. This left 3,550 lots to be allocated to the urban area.

An adjustment was then made to consider any applications currently in process that would help absorb some of the forecasted demand for future dwelling units. This was done to determine a resultant number of new dwellings to be accommodated by the year 2038. The number of applications in process (as received by the planning team from the City) was

395 dwellings. The final number of dwellings to be allocated therefore is calculated to be 3,155 dwellings.

This overall greenfield housing number was then broken down into dwelling type. The OP does not provide details on the mixture of dwelling types, so this was created by determining the split of dwellings drawn from metroeconomics' forecast. For single dwellings, this was calculated to be 65.3%, for semis it was 6%, townhouses were 2.9%, and apartments were 25.8%. A key assumption used during this analysis is that this housing mix will remain constant for the entire 20 year period. While this is not likely the case, in reality, it is difficult to determine how the housing mix will change over the years. The total dwelling growth of 3,155 dwellings was then broken down to determine the number of singles, semis, townhouses, and apartments to be expected by 2038. This resulted in 2,060 singles, 190 semis, 92 townhouses and 813 apartment units.

The dwellings then needed to be converted into gross hectares to determine the land demand. This was done by identifying the density targets for each of the dwelling types and dividing the number of dwelling in each dwelling type by its corresponding density target.

The density targets for each dwelling type are typically found in a municipality's OP; however, the City's OP is not specific on housing densities by type. Density numbers were therefore provided by City staff based on densities in current development applications. The City's assumptions for density numbers were 15 units per net hectare for singles and semis, 24 units per net hectare for townhouses, and 40 units per net hectare for



apartments. This was converted to gross hectares by taking 80% of the net hectare figure. This density was then applied to the unit numbers for each dwelling type to create a gross land demand per type. This resulted in a demand of 171.7 gHa for singles, 15.8 gHa for semis, 4.8 gHa for townhouses and 25.4 gHa for apartments. Added together, this creates a total of 218 gHa, which is the total land needed to meet the future demand for housing.

This figure was then compared against the available designated greenfield land as provided by the municipality. This was to determine the residual and whether or not there was enough land to accommodate this growth and if not, how many additional hectares are needed to do so. There are two types of residual land identified as part of this calculation:

- a residual based on serviceable greenfield land ONLY; and,
- a residual which takes into account partially serviced or unserviced greenfield land (i.e., ALL greenfield land).

The City identified 111.4 gHa of land designated as greenfield that is already serviceable and 11.9 gHa of designated greenfield land with partial or no services. The calculations demonstrate that there will be a residual demand for 106.3 gHa of land when only the serviceable land is considered, and a residual demand of 94.4 gHa if partially serviced or unserviced lands are considered as part of the City's supply of residential land.

As for the rural area, the City identified that there are 234 lots available for rural development. With the 10% allocation figure of 394 lots being assigned to rural areas, this means there is a demand for an additional 151 lots to meet the growth.

The calculations for the residential land needs can be seen in detail in **Table 3: Residential Land Needs**.

3.1.2 Observations

This analysis shows that there is not enough land available to accommodate the forecasted growth under the current OP policy framework (i.e., "business as usual" approach). The City has identified that there are also an additional 611 units that are prime for intensification. However, as the OP does not identify a percentage of future units to be directed towards intensification sites, this is not factored into the calculations for the residual land needs analysis.

Further, Sault Ste. Marie is a growing City and is likely to follow the trend of other growing urban centres, which is away from sprawl and towards intensification. Good planning decisions aim to reduce sprawl to respond to the growing need to develop more efficiently and cost-effectively. Intensification is key because it can absorb some growth that would reduce the number of greenfield hectares, which is a more land-efficient and cost-effective approach.

In terms of how this work informs OP policy development, it is clear that the updated Sault Ste. Marie OP should have a well-defined allocation for growth in the settlement area vs. rural area, an intensification target, and a target housing mix.

Sault Ste Marie Residual Table 3: Residential

a	b	c	d	e	f	g	h	i	
Residential Growth									
2018 Current Dwelling Units *	3,2968 Dwellings	2038 Future Dwelling Units *	3944 Dwellings	Urban/Greenfield Dwelling Allocation	3550 Dwellings	Remaining Greenfield Dwelling Allocation	3550 Dwellings	Applications Currently In Process	395
				Rural Dwelling Allocation	10.0%	Dwelling Intensification Allocation	0.0%	Greenfield dwellings to allocate	3155 Dwellings

j	k	l	m
OP Dwelling Mix Percentages**			
Singles	65.3%	Townhouses	25.8%
Semis	6.0%	Apartment	

n	o	p	q	r	s	t	u
OP Dwelling Mix							
Singles	2060 Units	Semis	190 Units	Townhouses	92 Units	Apartment	813 Units
				Single House Density	12.0 UpGH	Semi	12.0 UpGH
						Townhouse Density	19.2 UpGH
							32.0 UpGH
							***Net densities provided by staff and converted to gross density: 80% High Medium Low 24.0 UpNH 15.0 UpNH 15.0 UpNH 40.0 UpNH

v	w	x	y	z
Gross Land Demand				
Singles	171.7 gHa	Semis	15.8 gHa	Apartment
				25.4 gHa
				218 Gross Hectares

aa	ab	ac	ad
Greenfield Designated & Servicable	111.4 Gross Hectares	Urban Residual A	Urban Residual B
		Hectares of Unmet Demand	Hectares of Unmet Demand
		106.3 Gross Hectares	94.4 Gross Hectares
		Greenfield Designated with Partial Services or No Services	
		11.9 Gross Hectares	

ah	ai	aj
Intensification		
Intensification Demand (OP Allocation)	0 Units	Residual: Unmet Intensification Unit Demand
		611 Units
		-611 Units

ae	af	ag
Rural		
Rural Demand (OP Allocation)	394 lots	Residual: Unmet Rural Lot Demand
		151 lots
		Rural Supply
		243 lots

*Source: MetroEconomics **Source: MetroEconomics, not the OP

3.2 Institutional Land Needs

3.2.1 Method

Calculating the residential land needs for institutional uses in Sault Ste. Marie follows a similar approach to residential – convert growth to land and determine whether additional land is needed – although, it involves a different set of calculations.

Firstly, the employment forecast by metroeconomics for the period 2018 to 2038 was reviewed to identify employment by type. The employment types were derived from the North American Industry Classification System (NAICS), available on the Statistics Canada website. These numbers have been listed for the following employment calculations for reference.

For institutional, the numbers for education (NAICS 61) and health / social services (NAICS 62) were compiled. Using metroeconomics' numbers for 2018, this was 8,261 employees, and for 2038, it was 9,839 employees. The total growth expected was calculated to be 1,578 additional employees.

To determine the demand this employment growth creates, this number needed to be converted to gross hectares. The planning team used an employment density figure of 40 employees per net hectare. This is based on the planning team's experience working in similar municipalities which have comparable sizes and growth rates. This was then converted to gross hectares by a conversion factor of 20%, recognizing that additional land beyond the lots themselves are required to develop future institutional land uses, such as roads. This results in an employment density of 32 employees per gross hectare. When applied to the 1,578 expected institutional employees, this results in an expected 49.3gHa of land to accommodate the increase.

With employment based land uses, it is generally agreed upon that there are some vacant buildings that are currently not being used. These empty spaces are capable of absorbing some of the expected growth. Therefore, an allowance was made for a 5% vacancy rate based on the planning team's experience, recognizing that there is some available floor space for institutional purposes, but not suitable for occupancy/immediate absorption. The total demand for land, including the vacancy rate, was calculated to be 51.8 gHa.

The City provided the planning team with the number of current applications in process for institutional uses. With zero applications for institutional uses, there is no adjustment needed to the estimated demand, so it remains at 51.8 gHa. The available vacant institutional land in Sault Ste. Marie is 65.8 gHa, a number which was provided by the City. This means there is enough land within the City to accommodate the projected growth, with an additional 14 gHa of land that would remain unused and available beyond 2038. The calculations for the residential land needs can be seen in detail in **Table 4: Institutional Land Needs**.



3.2.2 Observations

Given that there is an anticipated 14 gHa surplus of institutional land, the City may need to consider a strategy to align the amount of designated institutional land to the supply, so that the updated OP conforms to the PPS.

Sault Ste Marie Residual Table 4: Institutional

a		b		c		d		e		f		g		h	
Institutional Employee Growth				Expected Institutional Ha Demand											
Institutional Employment Number	Future Institutional Employment Number	Total Employee Growth Expected	Employment density net	Employment density gross	Land Needed	Vacancy Adjustment @ 5%	Total Demand								
8261 Employees	9839 Employees	1578 Employees	40.0 E/nHa	32.0 E/gHa	49.3 gHa	2.5 gHa	51.8 gHa								

i		j		k		l		m		n		o		p	
Institutional Applications				Adjusted Demand				Urban Residual				Rural			
Applications in process net	Applications in process, gross @ 20% conversion factor on net	Adjusted Demand	Vacant Institutional Land	Urban Residual	Urban Residual	Rural Institutional Applications in Process net	Rural Institutional Applications in Process Gross	Residual	Residual	Residual	Residual	Residual	Residual	Residual	Residual
0.0 nHa	0.0 nHa	51.8 gHa	65.8 gHa	-14.0 gHa	-14.0 gHa	0.0 gHa	0.0 nHa	0.0 gHa	0.0 gHa	0.0 nHa	0.0 gHa	0.0 gHa	0.0 gHa	0.0 gHa	0.0 gHa

q	
TOTAL RESIDUAL	Hectares of Unmet Institutional Demand
	-14.0 gHa

3.3 Major Employment Land Needs

3.3.1 Method

The calculation for the major employment residual follows the same approach as institutional, except for land use-specific assumptions relevant to major employment land uses. The employment forecast was reviewed by employment type – major employment includes utilities (NAICS 22), construction (NAICS 23), manufacturing (NAICS 31-33), wholesale trade (NAICS 41) and transportation/warehouse (NAICS 48-49). For 2018, this was 6,495 employees, and for 2038 this was 7,292 employees. The total growth expected was calculated to be 797 additional employees.

For major employment, the employment density is significantly lower than employment density in institutional and commercial land uses; this is due to declines in manufacturing (that historically had high employment density) and automation that has reduced the number of workers in a variety of major employment sectors. The net employment density is assumed at a common Ontario standard of 10 employees per net hectare, which is based on the planning team's experience. This number was then converted to gross hectares using a factor of 20% adjustment. The resulting calculation is approximately 99.6 gHa of land is needed to accommodate industrial uses.

Similarly to the major employment numbers, an allowance was also made for a 10% vacancy rate, recognizing that there is always some available floor space for major employment purposes but not suitable for immediate absorption (again relying on the planning team's experience). This results in a total demand for land of 109.6 gHa.

The planning team factored in the number of applications currently in process using the numbers provided by the City. At the time, there were no active major employment development applications, and so no adjustments were made to the 109.6 gHa of land demand.

The available vacant major employment land in Sault Ste. Marie, according to numbers provided by the City is 452.2 gHa. Therefore, there is a surplus of 342.6 gHa for major employment uses, meaning there is enough land within the City to accommodate the projected growth. The calculations for the residential land needs can be seen in detail in

Table 5: Major Employment Land Needs.

3.3.2 Observations

While there is a surplus of employment land in Sault Ste. Marie, the PPS promotes the long-term protection of lands for employment. As it relates to this work informing the OP update, the City may wish to consider a phasing strategy to manage the oversupply or consider a rationalization of what land is designated for the future.



Sault Ste Marie Residual Table 5: Major Employment

a		b		c		d		e		f		g		h			
Major Employment Number		Future Major Employment Number		Total Employee Growth Expected		Employment density net		Employment density gross		Land Needed		Vacancy Adjustment @ 10%		Total Demand			
6495	Employees	7292	Employees	797	Employees	10.0	E/nHa	8.0	E/gHa	99.6	gHa	10.0	gHa	109.6	gHa		
i		j		k		l		m		n		o		p		q	
Available Industrial Land		Applications in process, gross @ 20% conversion factor on net		Adjusted Demand		Vacant Industrial Land		Urban Residual		Employment Land		Rural Residual Applications in Process		Rural Applications in Process Gross		TOTAL RESIDUAL Hectares of Unmet Industrial Demand	
0.0	nHa	0.0	nHa	109.6	gHa	452.2	gHa	-342.6	gHa	0.0	gHa	0.0	nHa	0.0	gHa	-342.6	gHa

3.4 Commercial Land Needs (Excluding Retail)

3.4.1 Method

The residual analysis for commercial (excluding retail) is based on the forecasts by metroeconomics. The employment numbers were reviewed and those commercial activities representative of this category include: information and culture (NAICS 51), finance and insurance (NAICS 52), professional, scientific and technical services (NAICS 54), arts, entertainment and recreation (NAICS 71), accommodation and food (NAICS 72) and other services (NAICS 81). The forecasts for retail trade (NAICS 44-45) were excluded since retail trade has been analyzed separately through a more rigorous approach based on trade area and expenditures, as discussed in **Section 4** of this report.

The total number of employees in commercial jobs (excluding retail trade) for 2018 amounted to 9,868 employees, and for 2038, this was 12,907 employees. The total growth was calculated to be 3,039 employees. The employment density for commercial jobs was assumed to be the same as the institutional employment type, as these types of uses have similarly high employee density: 40 employees per net hectare. As per the other types, this was converted to gross hectares using a conversion factor of 20% which resulted in an employment density of 32 employees per gross hectare. This resulted in a total of 95 gHa needed to accommodate the forecasted growth.

A vacancy adjustment rate was also applied to this calculation. For commercial uses, this was determined to be 10%, based on the team's experience. The resulting total land needed to accommodate commercial growth is 104.5 gHa. There were no active development applications for commercial, so no adjustment needed to be made for this.

According to the City, there is a total of 45.2 gHa of land available to accommodate commercial uses. When compared with the expected growth, there is a need for 59.3 gHa to meet the demand. The calculations for the commercial land needs can be seen in detail in **Table 6: Commercial Land Needs**.

3.4.2 Observations

Many of the commercial land uses included in this analysis can contribute to achieving mixed use development, and in certain instances are well-suited to help achieve intensification goals (e.g., an apartment building with main floor commercial). In updating

its Official Plan, the City should consider how some of this commercial growth can be guided to support mixed use and/or intensification, rather than being all greenfield development.

Sault Ste Marie Residual Table 6: Commercial

a		b		c		d		e		f		g		h			
Commercial Employment Growth				Expected Commercial Ha Growth													
Commercial Employment Number	Future Commercial Employment Number	Total Employee Growth Expected	Employment density net	Employment density gross	Land Needed	Vacancy Adjustment	Total Demand										
9868 Employees	12907 Employees	3039 Employees	40.0 E/nHa	32.0 E/gHa	95.0 gHa	9.5 gHa	104.5 gHa										
i		j		k		l		m		n		o		p		q	
Commercial Applications		Adjusted Demand		Residual		Urban Residual				Rural				TOTAL RESIDUAL			
Applications in process net	Applications in process, gross @ 20% conversion factor on net	Remaining land	Vacant Employment land							Rural Commercial Land	Rural Applications in Process Net	Rural Applications in Process Gross		Hectares of Unmet Institutional Demand			
0.0 nHa	0.0 gHa	104.5 gHa	45.2 gHa							0.0 gHa	0.0 nHa	0.0 gHa		59.3 gHa			

4 Retail Commercial Land Needs

4.1 Method, Assumptions, and Caveats

The general approach employed for the analysis of retail commercial land needs follows several steps, outlined below:

- Delineation of the Sault Ste. Marie trade area in order to determine the market for retail goods and services in Sault Ste. Marie;
- Review of relevant market trends;
- Enumeration of existing retail commercial floor space in Sault Ste. Marie (i.e., supply);
- Estimation of expected expenditure levels for specific types of retail goods and services using population projections to 2038;
- Calculation of estimated residual market demand and resulting floor space needs using assumed sales efficiency rates; and
- Calculation of estimated residual land needs once accounting for factors such as the impact of e-commerce, floor space vacancy reuptake rates, and land coverage rates.

The analysis uses 2016 as its base year and estimates the need for lands designated for retail commercial purposes in intervals up to the year 2038.

The following subsections describe the analytical approach in greater detail, including assumptions made and caveats applicable to the analysis.

4.1.1 Income and Expenditure Estimation Model

The findings of the analysis are based on the assumption that a household's spending patterns directly relate to its income, such that higher levels of income lead to higher levels of expenditure for certain types of retail goods and services.

This assumption is tested using linear regression, a proven statistical method which allows us to understand the relationship between these two variables. The linear regression model used in this analysis uses income and expenditure data from the 2015 *Survey of Household Spending* and the 2016 *Retail Trade Survey*. Applying this method to analyze

historical income and expenditure data shows that there is a strong positive correlation between the two variables; such that an increase in income will likely lead to an increase in expenditure.

Given this relationship between income and spending, the model is used to predict expenditure levels of a particular type of good for a given level of income. Using income data for the Primary and Secondary Trade Areas, the model allows us to estimate annual retail expenditure levels for Sault Ste. Marie and the surrounding area.

The data used to build the model and resulting regression equations are detailed in the attached appendices. **Appendix A** details the per-capita income and expenditure indices used to calculate the regression equations used by the predictive model. **Appendix B** lists the reported values for annual retail sales by store type for Ontario in 2016, as well as estimated per-capita values; this data is sourced from Statistics Canada's annual *Retail Trade Survey*. **Appendix C** lists the average income and population for each of the trade area geographies. **Appendix D** lists the per-capita income and expenditure indices computed using the regression equations detailed in **Appendix A** as well as the estimated levels of annual retail expenditure by spending category for the Primary and Secondary Trade Areas. These values are computed using the expenditure data listed in **Appendix B** and the average income and population values listed in **Appendix C**.

4.1.2 Trade Area Boundaries

A trade area represents a geographic area from which retailers would normally expect to derive the majority of their customers. Retail market studies typically delineate both primary and secondary trade areas. The primary trade area is typically representative of the geographic area in which a majority of customers and/or spending originate (e.g., 55% to 70%); the secondary trade area typically represents a further 15% to 20% of consumer demand.

Current license plate survey and consumer telephone survey data were not available for use in defining the 'demand watershed' for this analysis. Previous retail studies were

limited in scope and were not intended to fulfill the function of a comprehensive city-wide study, limiting the comparability of the geographic boundaries used. Furthermore, the limited scope of work for this analysis implied that only publicly-accessible sociodemographic datasets would have to be used, ruling out the ability to define custom geographic boundaries for the purposes of data requests.

Accordingly, the geographic boundaries of the primary and secondary trade areas had to be defined using local knowledge and consultant input.

4.1.3 Population Estimates and Projections

Population values for the years 2016 to 2038 for the province of Ontario, Algoma census district, Sault Ste. Marie census subdivision and the thirteen census subdivisions that make up the Secondary Trade Area were used in this analysis. Values for all geographies in the 2016 base year were sourced from the Census of Canada. Estimated and projected values for the Sault Ste. Marie census subdivision in 2017 and future years to 2038 were prepared by metroeconomics (see Section 2 of this report for further detail). Estimated and projected values for the thirteen census subdivisions that make up the Secondary Trade Area were derived by the consultant team in proportion to the values for the higher-order Algoma census division.

4.1.4 Local Capture and In-flow Rates

The *local capture rate* is the share of total estimated expenditure for a given retail category which will end up being spent within a given trade area by the consumers who live within that trade area. Conversely, the remainder not included in the local capture rate can be thought of as a “leakage” rate; that is, the share of total estimated expenditure for a given retail category attributable to consumers who live within that trade area but which will end up being spent outside that trade area. The *expenditure in-flow rate* is the share of total estimated expenditure for a given retail category which will end up being spent within a given trade area by consumers who live outside that trade area.

Local capture and in-flow rates are key inputs into the analytical model used in this analysis as they are used to calibrate estimated expenditure levels for specific trade areas. These rates are typically determined using area-specific population surveys, such as telephone surveys (used to understand the geographic distribution of retail spending within and

outside a given trade area) and/or license plate surveys (used to understand the geographic distribution of consumer demand for a given retail expenditure category at a site-specific level).

Current survey data representative of the city-wide population was not available for use in this analysis. Accordingly, reasonable assumptions were made following a review of previous retail studies and application of the professional judgment of the consultant team in concert with local knowledge from staff. Local capture rates are set for the Primary and Secondary Trade Areas, and expenditure in-flow rates are set for the overall Sault Ste. Marie Trade Area, for each major retail expenditure category and each of the milestone years of the analysis; detailed values are given in Table 1 through Table 5 in Appendix F.

4.1.5 Retail Floor space Inventory

A current, city-wide inventory of retail floor space was not available for use in this analysis. Accordingly, reasonable assumptions were made following a review of previous retail studies and application of the professional judgment of the consultant team in concert with local knowledge from staff.

4.1.6 Cross-Border Shopping

Cross-border shopping is a recognized peculiarity of the Canadian retail landscape. This is especially true in border locations such as Sault Ste. Marie, where access to the US retail market is both geographically proximate and relatively easy. Cross-border shopping can take many forms: retail sales wherein the purchaser is Canadian but the entire transaction takes place in a US location; sales where the purchaser is in Canada but orders from an American retailer and picks up the goods in the US; or sales where the purchaser is in Canada and has the goods delivered to Canada from an American retailer.

Due to limitations in publicly-available survey data, it is inherently difficult to estimate the relative impact of cross-border shopping on overall retail sales in Canada. However, it can be reasonably assumed that cross-border shopping is likely to respond to changes in the exchange rate between the US dollar and the Canadian dollar; that is, cross-border shopping is likely to peak when the Canadian dollar is strongest relative to the US dollar. It can be reasonably assumed that cross-border shopping is likely heavily-weighted towards a

single direction; that is, cross-border shopping is likely to take the form of Canadian spending at American retailers.

With these assumptions in mind, this analysis accounts for the ‘leakage’ that may occur through cross-border shopping by way of reduced local capture rates, with consideration paid to the propensity for cross-border shopping to be more prevalent within specific retail categories.

4.2 Market Characteristics

The following sections describe the key market characteristics that form the foundational elements of the retail market analysis.

4.2.1 Trade Area

The boundary of the Primary Trade Area was set to match that of the Sault Ste. Marie census subdivision boundary as of the 2016 census period (i.e., the Primary Trade Area boundary matches the municipal boundary used by the City itself). The boundary of the Secondary Trade Area was defined to include thirteen surrounding census subdivisions:

- Bruce Mines;
- Garden River 14;
- Hilton;
- Hilton Beach;
- Jocelyn;
- Johnson;
- Laird;
- Macdonald, Meredith and Aberdeen Additional;
- Plummer Additional;
- Prince;
- Rankin Location 15D;
- St. Joseph; and
- Tarbutt and Tarbutt Additional

Taken together, the Primary Trade Area and the Secondary Trade Area are collectively referred to as the Sault Ste. Marie Trade Area, boundaries for which are depicted in **Figure 1** in **Appendix E**.

4.2.2 Population

Table 7 details the estimated and projected population growth for the Sault Ste. Marie Trade Area between the base year of the analysis (2016) and the horizon year (2038).

Population decline is assumed to occur over the study period in all thirteen Secondary Trade Area census subdivisions, with the Primary Trade Area itself making only modest gains in population over the same period.

Table 7: Population Estimates and Projections, Sault Ste. Marie Trade Area, 2016 and 2038

Geography	Trade Area	Estimated Population, 2016	Projected Population, 2038
Sault Ste. Marie	Primary	73,368	84,184
Bruce Mines	Secondary	580	541
Garden River 14	Secondary	1,125	1,050
Hilton	Secondary	305	285
Hilton Beach	Secondary	170	159
Jocelyn	Secondary	315	294
Johnson	Secondary	750	700
Laird	Secondary	1,050	980
Macdonald, Meredith and Aberdeen Additional	Secondary	1,610	1,503
Plummer Additional	Secondary	660	616
Prince	Secondary	1,010	943
Rankin Location 15D	Secondary	N/A	N/A
St. Joseph	Secondary	1,240	1,158
Tarbutt and Tarbutt Additional	Secondary	535	499
Total Population	Primary Trade Area	73,368	84,184
Total Population	Secondary Trade Area	9,350	8,729
Total Population	Sault Ste. Marie Trade Area	82,718	92,913
Notes			
N/A indicates suppression of population data due to incomplete enumeration.			

4.2.3 Average Income and Expenditure

Average per-capita incomes are lower in the Sault Ste. Marie Trade Area compared to the province as a whole. As of 2015, average annual income per-capita in the Primary Trade Area was approximately \$42,143, compared to \$41,578 in the Secondary Trade Area and \$42,083 in the Sault Ste. Marie Trade Area as a whole. Values for the province as a whole averaged \$47,915 in the same period.

Accordingly, it has been estimated that retail expenditure levels are slightly lower in the Sault Ste. Marie Trade Area compared to the province as a whole.

4.2.4 Retail Market Trends

The following retail market trends have been identified as important with respect to their potential impact on the retail commercial market and long-term demand in Sault Ste. Marie.

- **E-commerce:** E-commerce, as it relates to retail, refers to retail transactions which occur through electronic media (e.g., purchasing over the Internet); while completion of a transaction may occur outside the context of a traditional storefront setting (e.g., goods delivered by mail), e-commerce may still imply a bricks-and-mortar retail presence (e.g., order fulfillment at a local store).² To adapt to this trend, many retailers are focussing their growth efforts on e-commerce channels, recognizing the significant market opportunity this provides. A variety of marketing approaches are used to support e-commerce, including the provision for same-day delivery of retail goods, pick-up locations for online purchases, special discounts applicable only to web-based purchases, and free shipping. Some retailers are now allocating significant store space to 'showrooming,' providing space for consumers who wish to inspect a product of interest in a store, but who intend to complete the purchase transaction online. E-commerce is also thought to play a part in driving retailers to reduce store numbers or store size significantly.

- **Sales of alcohol in grocery stores:** Changes to the alcohol distribution and sales regime beginning in 2015 have seen beer, wine, and cider sold in more than 200

grocery stores across Ontario, with plans to expand the number of licensed locations to up to 450 stores. This change implies an impact on the level of expenditure related to the food-store retail and liquor/beer/wine categories.

- **Consolidation:** The retail market landscape has seen many Canadian chains resorting to acquisitions in order to increase market share and compete with large international retailers, leading to a consolidation of major chains and affiliated marques.
- **Blurring of retail types:** Traditionally, most retailers focused on a single line of merchandise: grocery stores sold food; pharmacies sold health products; clothing stores sold apparel; etc. In an effort to capture a large market share, modern retail stores increasingly function as 'one-stop' destinations for a variety of goods, leading to a blurring of traditional retail categories.
- **Competitive pressures facing department stores:** The Canadian retail marketplace has historically been shaped by the entrance of international retail players. Recent years have seen many foreign brands enter the Canadian marketplace, placing competitive pressure, particularly on traditional department store retailers. This has resulted in the closure of many department stores in shopping malls, such as the recent closure of the Sears store at Station Mall in Sault Ste. Marie.

4.3 Existing Retail Supply

The following section describes the existing retail supply within the City of Sault Ste. Marie.

4.3.1 Sault Ste. Marie Retail Nodes

The existing retail supply within the City of Sault Ste. Marie can be categorized into four main nodes, as delineated by lands designated for commercial uses in the OP. The boundaries of these nodes are depicted in **Figure 2** in **Appendix E**. A site visit to each of the four retail nodes was conducted in August 2017, observations from which are summarized as follows:

- **Node 1: Downtown** – This node is generally bounded by Grosvenor Avenue to the north, Simpson Street to the east, the St Mary's River to the south, and the International Cross bridge to the west. This node includes several distinct sub-nodes:

² It must be recognized that researchers and practitioners alike are still grappling with how to clearly define the nature of e-commerce as it relates to retail.

- o From Church Street west to Elgin Street, typical retail/commercial uses include banks, personal services, storefront retail uses, professional services, and restaurants;
- o From Elgin Street west to Gore Street, typical uses include a variety of retail store fronts and services ranging from hair salons, restaurants, bike stores and a music shop. There is also an auto repair shop, a fast food restaurants, several vacant lots and some surface parking; and,
- o Station Mall, located at 293 Bay Street, is the city's largest shopping centre and is anchored by a Wal-Mart and formerly anchored by a large Sears department store,³ and includes many chain retail stores typical of a central shopping mall.
- **Node 2: North (Great North Road)**, which includes properties on both sides of the lengths of Great Northern Road and Pim Street from 4th Line East to MacDonald Avenue;
- **Node 3: East (Trunk Road)**, which includes properties mostly on the southern portion of the length of Trunk Road between Fournier Road to Wellington Street East; and,
- **Node 4: West (Second Line)**, which includes a handful of commercial properties on either side of Second Line West between 2nd Avenue and Peoples Road.

4.3.2 Retail Floor Space Inventory

The inventory of existing retail floor space in the Primary Trade Area as at August 2017 is given in **Table 8**. It is believed that approximately 2.79 million square feet of retail commercial space exists in Sault Ste. Marie.

Table 8: Assumed Retail Floorspace as of 2017

Retail Expenditure Category	Total Floorspace (sq.ft.)	Share of Total Floorspace
Food and Convenience Retail	422,000	15%
General and Specialty Retail	1,388,000	50%
Home Improvement	331,000	12%
Retail Alcohol Sales	43,000	2%
Restaurants	299,000	11%
Vacant	305,000	11%
Total floorspace, sq.ft.	2,788,000	

Despite the approximate nature of the floor space inventory given above, an adjusted set of values is given for 2018 and onwards in order to account for the known closure (and thus conversion to vacant status) of the Sears department store at Station Mall. The inventory of assumed extant retail floor space in the Primary Trade Area as at January 2018 is given in **Table 9**.

Table 9: Assumed Retail Floorspace as of 2018

Retail Expenditure Category	Total Floorspace (sq.ft.)	Share of Total Floorspace
Food and Convenience Retail	422,000	15%
General and Specialty Retail	1,264,074	45%
Home Improvement	331,000	12%
Retail Alcohol Sales	43,000	2%
Restaurants	299,000	11%
Vacant	428,926	15%
Total floorspace, sq.ft.	2,788,000	

³ Sears Canada filed for bankruptcy protection in June 2017 and subsequently closed 20 stores nationwide, including the location at Station Mall, on October 1, 2017.

4.4 Estimated Retail Demand and Land Needs

This section details the estimated expenditure levels for each retail category within the Sault Ste. Marie Trade Area and the resulting residual space and land needs.

4.4.1 Trade Area Expenditure Potential

In order to estimate the total future retail market demand, an estimation of current expenditure levels for each retail type is undertaken and projected forward based on population growth and assumed real growth. To assess the current expenditure levels in the Sault Ste. Marie Trade Area, average per-capita expenditure values for Ontario are adjusted to account for the difference in income levels between the two geographies. The process to adjust expenditure values is given in **Section 4.1.1** of this report.

4.4.1.1 Food and Convenience Retail

This category includes expenditure at supermarkets, grocery stores, specialty food stores and convenience stores.

It is estimated that expenditure potential for food store retail goods amounted to approximately \$203.9 million for the Sault Ste. Marie Trade Area in 2016 before accounting for trade in-flows and out-flows (i.e., pre-adjusted). Projecting forward using an assumed real growth rate of 0.25% per annum compounded to 2038, there is a total pre-adjusted expenditure potential of \$241.9 million in the Sault Ste. Marie Trade Area by 2038.

4.4.1.2 General and Specialty Retail

This category includes a variety of non-food retail goods and services: automotive sales (not including vehicle sales); furniture and home furnishings; electronics and appliances; health and personal care; clothing; sporting goods, hobby, book and music stores; general merchandise stores and other miscellaneous retailers.

It is estimated that expenditure potential for general merchandise goods amounted to approximately \$455.3 million for the Sault Ste. Marie Trade Area in 2016 before accounting for trade in-flows and out-flows (i.e., pre-adjusted). Projecting forward using an assumed real growth rate of 0.50% per annum compounded to 2038, there is a total pre-adjusted expenditure potential of \$570.7 million in the Sault Ste. Marie Trade Area by 2038.

4.4.1.3 Home Improvement

This category includes expenditure at stores that specialize in building materials and gardening equipment and supplies.

It is estimated that expenditure potential for home improvement goods amounted to approximately \$66.7 million for the Sault Ste. Marie Trade Area in 2016 before accounting for trade in-flows and out-flows (i.e., pre-adjusted). Projecting forward using an assumed real growth rate of 0.50% per annum compounded to 2038, there is a total pre-adjusted expenditure potential of \$83.5 million in the Sault Ste. Marie Trade Area by 2038.

4.4.1.4 Retail Alcohol Sales

This category includes expenditure at stores which specialize in the sale of beer, wine, and liquor.

It is estimated that expenditure potential for retail alcoholic goods amounted to approximately \$49.3 million for the Sault Ste. Marie Trade Area in 2016 before accounting for trade in-flows and out-flows (i.e., pre-adjusted). Projecting forward using an assumed real growth rate of 0.25% per annum compounded to 2038, there is a total pre-adjusted expenditure potential of \$58.5 million in the Sault Ste. Marie Trade Area by 2038.

4.4.1.5 Restaurant Sales

It is estimated that expenditure potential for restaurants amounted to approximately \$90.6 million for the Sault Ste. Marie Trade Area in 2016 before accounting for trade in-flows and out-flows (i.e., pre-adjusted). Projecting forward using an assumed real growth rate of 0.25% per annum compounded to 2038, there is a total pre-adjusted expenditure potential of \$107.6 million in the Sault Ste. Marie Trade Area by 2038.

4.4.2 Residual Market Demand and Space Needs

Once potential per-capita expenditure values are calculated for each retail category, potential demand for retail commercial space can be estimated through the calculation of residual market demands. This involves several steps:

1. Multiplying the estimated future per-capita expenditures in each retail category by the projected population levels; then
2. Applying assumed local capture rates; and,

3. Applying assumed expenditure in-flow rates; then,
4. Dividing the total expenditure potential by the existing assumed retail floor space in each category.

This process yields the sales performance per square foot of retail floor space for each category in the base year. Allowance is made for a limited amount of growth in the base year performance of the existing space in future years. Subtracting the expected sales values of the existing retail floor space from the overall expenditure potential yields an amount "left over" for new space (i.e., the residual potential). Dividing the future residual potentials by appropriate sales performance rates for each retail category yields an estimate of the warranted new space needed to meet additional, future demand.

Residual demand indicates when new retail space could be developed without taking sales away from existing space; in this way, it constitutes a test for the 'ease of entry' of new space into the market. These values are used to plan for a balanced supply of space within the retail commercial hierarchy of Sault Ste. Marie.

4.4.2.1 Food and Convenience Retail

Table 1 in Appendix F details residual demand for food store retail sales. It is assumed that 95% of total category sales will be captured by retailers in Sault Ste. Marie (i.e., the Primary Trade Area) for the entirety of the study period. In the Secondary Trade Area, it is assumed that 50% of total category sales will be captured by retailers in Sault Ste. Marie for the entirety of the study period. Sales in-flow originating from residents living outside the Sault Ste. Marie Trade Area are assumed to increase local sales by 15% throughout the study period.

Based on these assumptions, it is estimated that Sault Ste. Marie will have captured approximately \$215.7 million in sales in 2016. The sales potential is estimated to increase to approximately \$258.4 million by 2038. Once the sales volumes of existing retail operations are taken into account, the residual sales potential is estimated to be approximately \$41.2 million by 2038.

Based on an average sales productivity of \$515 per square foot, potential residual space demand for more than 8,900 square feet of space is estimated to be warranted as early as 2021, increasing to more than 79,000 square feet by 2038.

4.4.2.2 General and Specialty Retail

Table 2 in Appendix F details residual demand for general and specialty retail sales. It is assumed that 75% of total category sales will be captured by retailers in Sault Ste. Marie (i.e., the Primary Trade Area) for the entirety of the study period. In the Secondary Trade Area, it is assumed that 50% of total category sales will be captured by retailers in Sault Ste. Marie for the entirety of the study period. Sales in-flow originating from residents living outside the Sault Ste. Marie Trade Area are assumed to increase local sales by 20% throughout the study period.

Based on these assumptions, it is estimated that Sault Ste. Marie will have captured approximately \$410.8 million in sales in 2016. The sales potential is estimated to increase to approximately \$518.4 million by 2038. Once the sales volumes of existing retail operations are taken into account, the residual sales potential is estimated to be approximately \$140.6 million by 2038.

Based on an average sales productivity of \$300 per square foot, potential residual space demand for more than 166,000 square feet of space is estimated to be warranted as early as 2021, increasing to more than 468,000 square feet by 2038.

4.4.2.3 Home Improvement

Table 3 in Appendix F details residual demand for home improvement retail sales. It is assumed that 75% of total category sales will be captured by retailers in Sault Ste. Marie (i.e., the Primary Trade Area) for the entirety of the study period. In the Secondary Trade Area, it is assumed that 50% of total category sales will be captured by retailers in Sault Ste. Marie for the entirety of the study period. Sales in-flow originating from residents living outside the Sault Ste. Marie Trade Area are assumed to increase local sales by 20% throughout the study period.

Based on these assumptions, it is estimated that Sault Ste. Marie will have captured approximately \$60.1 million in sales in 2016. The sales potential is estimated to increase to approximately \$75.9 million by 2038. Once the sales volumes of existing retail operations

are taken into account, the residual sales potential is estimated to be approximately \$15.2 million by 2038.

Based on an average sales productivity of \$185 per square foot, potential residual space demand for more than 4,000 square feet of space is estimated to be warranted as early as 2021, increasing to more than 42,000 square feet by 2038.

4.4.2.4 Retail Alcohol Sales

Table 4 in **Appendix F** details residual demand for alcohol retail sales. It is assumed that 70% of total category sales will be captured by retailers in Sault Ste. Marie (i.e., the Primary Trade Area) for the entirety of the study period. In the Secondary Trade Area, it is assumed that 50% of total category sales will be captured by retailers in Sault Ste. Marie for the entirety of the study period. Sales in-flow originating from residents living outside the Sault Ste. Marie Trade Area are assumed to increase local sales by 20% throughout the study period.

Based on these assumptions, it is estimated that Sault Ste. Marie will have captured approximately \$41.8 million in sales in 2016. The sales potential is estimated to increase to approximately \$49.9 million by 2038. Once the sales volumes of existing retail operations are taken into account, the residual sales potential is estimated to be approximately \$7.8 million by 2038.

Based on an average sales productivity of \$980 per square foot, potential residual space demand for almost 900 square feet of space is estimated to be warranted as early as 2021, increasing to more than 7,900 square feet by 2038.

4.4.2.5 Restaurants

Table 5 in **Appendix F** details residual demand for restaurant retail sales. It is assumed that 85% of total category sales will be captured by retailers in Sault Ste. Marie (i.e., the Primary Trade Area) for the entirety of the study period. In the Secondary Trade Area, it is assumed that 50% of total category sales will be captured by retailers in Sault Ste. Marie for the entirety of the study period. Sales in-flow originating from residents living outside the Sault Ste. Marie Trade Area are assumed to increase local sales by 20% throughout the study period.

Based on these assumptions, it is estimated that Sault Ste. Marie will have captured approximately \$91.8 million in sales in 2016. The sales potential is estimated to increase to approximately \$109.9 million by 2038. Once the sales volumes of existing retail operations are taken into account, the residual sales potential is estimated to be approximately \$17.4 million by 2038.

Based on an average sales productivity of \$310 per square foot, potential residual space demand for more than 6,200 square feet of space is estimated to be warranted as early as 2021, increasing to more than 56,000 square feet by 2038.

4.4.3 Residual Land Needs

In order to arrive at an estimation of the amount of land needed to accommodate residual space demand, a number of adjustments are applied to the residual space demand values.

4.4.3.1 E-Commerce Adjustment Factor

E-commerce has begun to play a notable role in the Canadian retail space, and its effects on traditional 'bricks and mortar' retail and commercial space cannot be ignored. Analysts have attempted to estimate and forecast the impacts of e-commerce to the distribution of sales (and therefore square-footage demand). While e-commerce has undoubtedly had a disruptive effect on the retail space (e.g., demise of storefront video rental and music sales; the practice of 'showrooming'), its effects are not felt equally across all retail sectors, nor in the same timeframe.

Our understanding of the nature of e-commerce in Canada suffers from variation in definitions and a lack of comparable data. As a result, estimating the impact of e-commerce on traditional retail remains inherently difficult.

Estimates of the current and future impact of e-commerce on retail sales in Canada vary widely. In their own reporting on the topic of e-commerce, the latest data from Statistics Canada indicates that e-commerce accounted for 2.7% of total retail sales in Canada in 2017, up from 1.4% in 2011. This can be seen as the most conservative estimates of the sales impact of e-commerce in the retail space, yet also likely the most rigorous. This is significantly lower than estimates for the US market, where e-commerce is estimated to account for 8.9% of total retail sales in 2017 (US Department of Commerce, 2018).

Although it is recognized that the US market for e-commerce is more mature than its

Canadian counterpart, the industry consensus in Canada tends toward the view that the Statistics Canada data inherently underestimates the true level of e-commerce retail sales in Canada by virtue of the way the data is collected: sales values are limited only to retailers located in Canada; therefore sales to retailers located outside Canada are not accounted for. This challenge will remain until survey instruments are made more sophisticated.

Yeates and Hernandez (2016) estimate that e-retail sales will account for 7.7% of all retail sales, and 11.5% of non-auto retail sales in Canada by 2020. Their projection assumes that e-retail sales will grow at a rate of 10% per annum between 2015 and 2020. The same authors (2018) further estimate that e-retail sales likely accounted for 8.0% of non-auto retail sales in Canada in 2016 and that sales accounted for by Amazon.ca alone may have accounted for 1.1% of all non-auto retail sales in Canada in that year.

On the generous end of the spectrum, Forrester Research (2014) estimates that e-commerce already accounted for 6.0% of retail sales in Canada by 2014, and projected its share to increase to 9.5% by 2019. This projection assumes that Canadian e-commerce sales are actually much closer to American patterns of retail spending than the Statistics Canada data would suggest.

There are alternate methods of estimating the impact of e-commerce centre on its direct impact on space needs. Yeates and Hernandez (2013) estimate that e-commerce will decrease retail service ratios by 2.0% per year at least until 2018. Kircher (2013) estimates that the impact of e-commerce already implies a reduction of overall retail service ratios by 1.5 to 2.0 square feet per-capita, which is projected to increase to between 4.0 to 5.0 square feet per-capita by the early 2020s.

The approach to estimating the impact of e-commerce on retail demand used in this study involves reducing the estimated residual space demands by a given e-commerce adjustment factor for each retail category. The e-commerce adjustment factor effectively operates as a discount on the amount of floor space needed to maintain a given sales productivity rate for a given level of demand. Specific adjustment factor values are given in

Table 10.

Table 10: E-commerce Adjustment Factors

Retail Category	Ecommerce Adjustment Factor, 2016	Ecommerce Adjustment Factor, 2017	Ecommerce Adjustment Factor, 2021	Ecommerce Adjustment Factor, 2026	Ecommerce Adjustment Factor, 2031	Ecommerce Adjustment Factor, 2036	Ecommerce Adjustment Factor, 2038
Food and Convenience	2.25%	2.75%	3.5%	4.00%	4.50%	5.00%	5.25%
Retail							
General and Specialty	4.50%	5.50%	7.00%	8.00%	9.00%	10.00%	10.50%
Retail							
Home Improvement	2.25%	2.75%	3.5%	4.00%	4.50%	5.00%	5.25%
Retail Alcohol Sales	0.00%	0.10%	1.00%	2.00%	3.00%	4.00%	4.50%
Restaurant	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

4.4.3.2 Vacancy Reuptake Adjustment

The final adjustment made to the residual space demands is the application of a vacancy reuptake adjustment. While residual demand values allow us to quantify the difference between the sales volumes that could be handled by existing floor space versus that which would be required to meet future demand, such values do not take into account vacant floorspace. Converting residual space demand values into land demand values could easily overinflate the true demand for physical floor space.

The approach used in this study recognizes that existing but vacant floor space may have become vacant due to a variety of factors such as physical configuration or location. It may be the case that an outmoded space may not suit the current realities of the retail market and may never be re-occupied by a similar retail use. However, it may also be the case that vacant floor space is refurbished and upgraded to match current market needs or repurposed for a different retail use.

We assume that an increasing share of the existing vacant retail floor space in Sault Ste. Marie will be reoccupied and will thus satisfy a portion of residual space demand. For the purposes of this study, it has been assumed that 50.0% of existing retail floor space could accommodate residual space demand through to 2021, increasing to 52.5% by 2026, 55.0% by 2031, 57.5% by 2036 and 58.75% by 2038.

According to these adjustment factors, it is estimated that a surplus of retail floor space will be maintained until at least 2021, with a need for more than 346,000 square feet of retail floor space by 2038.

4.4.3.3 Residual Land Needs

Once the foregoing adjustment factors have been applied, the final step to calculate estimated residual land demand is to convert from residual space demand in units of square feet to land area in hectares or acres. To do so, we apply a coverage rate and assume that the physical site layout of retail uses typically covers 25% to 30% of the total land area of a given parcel of land. The application of the coverage rate gives a realistic quantification of how much land will actually be needed to accommodate residual space demand.

While residual space demand values have been reported up to this point using average sales efficiency rates, we report final residual land demand values using a range of sales

efficiency rates: lower efficiency (i.e., less than current performance); medium efficiency (i.e., current performance); and higher efficiency (i.e., greater than current performance).

Assuming a land coverage rate of 25%, it is estimated that a surplus of land designated for retail uses will remain through 2021. It is estimated that the City will require approximately 0.6 to 1.2 hectares (1.4 to 3.0 acres) of additional land to meet residual space demands by 2026 and approximately 12.1 to 13.7 hectares (30.0 to 33.8 acres) by 2038.

Assuming a land coverage rate of 30%, it is estimated that a surplus of land designated for retail uses will remain through 2021. It is estimated that the City will require approximately 0.5 to 1.0 hectares (1.2 to 2.5 acres) of additional land to meet residual space demands by 2026 and approximately 10.1 to 11.4 hectares (25.0 to 28.1 acres) by 2038.

Detailed values are given in **Table 7** in **Appendix F**.

5 Observations and Conclusion

From this analysis, there are a number of key observations that can be made. Firstly, the forecasting work by metroeconomics establishes the following high-level trends emerging in Sault Ste. Marie, for the planning period of 2016 to 2036:

- A total population increase by about 9,900;
- An increase in younger and older demographics and a decrease in population of those aged 55-64;
- The need for approximately 4,000 new dwellings by 2036; and,
- An increase of 5,900 new economic base jobs by 2036⁴

The results of the residual analysis to inform an update to the City's Official Plan paint a picture of growth for Sault Ste. Marie under the current municipal planning policy regime. In answering the question of whether there is sufficient land in Sault Ste. Marie to accommodate the forecasted growth, the following are the results of the residual analysis:

- **Residential** – the projected growth exceeds the amount of land available, amounting to the need for up to approximately 106.3 gHa;
- **Institutional** – there is enough land to accommodate the projected growth, amounting to a surplus of approximately 14 gHa;
- **Major Employment** – there is enough land to accommodate the projected growth, amounting to a surplus of approximately 342.6 gHa;
- **Commercial excluding retail** – the projected growth exceeds the amount of land available, with up to 59.3 gHa needed by 2038;
- **Retail** – the projected growth exceeds the amount of available land, with up to 13.7 hectares needed by 2038, more specifically:
 - With a 25% land coverage per hectare, retail trade will need 12.1 to 13.7 ha of land by 2038; and,

- With 30% land coverage per hectare, retail trade will need 10.1 to 11.4 ha of land by 2038.

As this residual analysis is based on the current planning policies for the City of Sault Ste. Marie, it leads to the following key observations that should be considered as part of the City's follow-on work updating its Official Plan. To guide growth into the future, the City needs to consider:

- Residential land:
 - Establishing a planned target for the amount of growth to be accommodated in the urban area versus the outlying rural area;
 - An achievable intensification target to accommodate growth with the existing built-up area of the City;
 - Determining what density targets are appropriate for each residential density to achieve efficient, cost-effective development;
- Employment lands:
 - Consider a phasing strategy to manage the oversupply or consider a rationalization of what land is designated for the future; and,
- Commercial (excluding retail) lands:
 - Consider how some of the forecasted commercial growth can be guided to support mixed use and/or intensification, rather than being all greenfield development.

It is anticipated that the forthcoming work on updating the Official Plan will answer the questions above. In doing so, the residual analysis can be revisited to provide a picture of residual land needs under the City's new planning directions. This will then allow the City to identify a settlement area boundary and designate land uses that are aligned to the long-term forecast, ultimately achieving conformity to the PPS.

⁴ These figures are for the period 2016 to 2038 and not 2018 to 2038 as per the residual analysis as the calculation was based on the 2016 census data.

Appendix A: Regression Equations

Regression Equations

Geography	Income Quintile Category (n)	Income Index (x)	Expenditure Index				All quintiles
			Expenditure Index - FSR (y1)	Expenditure Index - NFSR (y2)	Expenditure Index - Restaurant (y3)	Expenditure Index - LBW (y4)	
Ontario	Lowest (1)	36.2	96.2	90.1	116.1	71.1	
Ontario	Second (2)	54.5	90.5	77.9	75.5	63.3	
Ontario	Third (3)	74.2	91.5	86.7	68.9	74.4	
Ontario	Fourth (4)	103.6	101.0	98.2	91.9	93.1	
Ontario	Highest (5)	176.6	114.2	122.2	140.9	164.9	
		100.0	100.0	100.0	100.0	100.0	

INCOME/EXPENDITURE REGRESSION EQUATIONS

$$y_1 = 84.70 + 0.16(x)$$

$$y_2 = 70.22 + 0.28(x)$$

$$y_3 = 69.89 + 0.32(x)$$

$$y_4 = 29.39 + 0.72(x)$$

Regression Equation:

$$y = a + bx$$

where:

$$b = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

$$a = \frac{\sum y - b(\sum x)}{n}$$

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n(\sum x^2) - (\sum x)^2][n(\sum y^2) - (\sum y)^2]}}$$

n = number of income classes

x = independent variable (Income Index)

y = dependent variable (Expenditure Index)

r = correlation coefficient (identifies how strong the relationship between the variables is)

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Appendix B: Estimates of Retail Sales in Ontario by Trade Group, 2016



Estimates of Retail Sales in Ontario by Trade Group, 2016

General Assumptions

Assumption	Population, 2016
Population of Ontario, 2016	13,448,494

Food Store Retail

NAICS 2012	Subcategory	Total Sales, 2016	Per-capita sales, 2016	Share of group sales
44511	Supermarkets and other grocery (except convenience) stores	\$ 28,342,423,000	\$ 2,107.48	84.2%
44512	Convenience stores	\$ 2,661,689,000	\$ 197.93	7.9%
4452	Specialty food stores	\$ 2,873,569,000	\$ 198.80	7.9%
	Subtotal	\$ 33,677,681,000	\$ 2,504.21	100.0%

Non-Food Store Retail

NAICS 2012	Subcategory	Total Sales, 2016	Per-capita sales, 2016	Share of group sales
4413	Automotive parts, accessories and tire stores	\$ 2,553,467,000	\$ 189.87	3.3%
442	Furniture and home furnishings stores	\$ 6,762,575,000	\$ 502.85	8.6%
443	Electronics and appliance stores	\$ 6,646,187,000	\$ 494.20	8.5%
446	Health and personal care stores	\$ 18,192,818,000	\$ 1,204.05	20.7%
448	Clothing and clothing accessories stores	\$ 13,005,118,000	\$ 967.03	16.6%
451	Sporting goods, hobby, book and music stores	\$ 4,006,777,000	\$ 297.93	5.1%
452	General merchandise stores	\$ 23,893,832,000	\$ 1,761.82	30.3%
453	Miscellaneous store retailers	\$ 5,381,669,000	\$ 400.17	6.9%
	Subtotal	\$ 78,242,243,000	\$ 5,817.92	100.0%

Home Improvement

NAICS 2012	Subcategory	Total Sales, 2016	Per-capita sales, 2016	Share of group sales
444	Building material and garden equipment and supplies dealers	\$ 11,454,890,000	\$ 851.76	100.0%
	Subtotal	\$ 11,454,890,000	\$ 851.76	100.0%

Retail Alcohol Sales

NAICS 2012	Subcategory	Total Sales, 2016	Per-capita sales, 2016	Share of group sales
4453	Beer, wine and liquor stores	\$ 8,696,747,000	\$ 646.67	100.0%
	Subtotal	\$ 8,696,747,000	\$ 646.67	100.0%

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Total Retail Sales

Trade Group	Total Sales, 2016	Total Per-capita sales, 2016	Share of overall sales
Food Store Retail	\$ 33,877,891,000	\$ 2,504.21	25.5%
General and Specialty Retail	\$ 78,242,243,000	\$ 5,817.92	59.2%
Home Improvement	\$ 11,454,860,000	\$ 851.76	8.7%
Liquor, Beer, Wine	\$ 8,696,747,000	\$ 646.67	6.6%
Total Retail Sales	\$ 132,071,761,000	\$ 9,821	100.0%

Appendix C: Average Income and Population by Trade Area

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Average Income and Population by Trade Area

Income Calculations by Trade Area and sub-geography

Geography	Trade Area Hierarchy	Population with		Total Income		Average		Calculated				
		Income	(x1000), 2015	Income, 2015	Income, 2015	Income, 2015	Income, 2015	Projected population, 2021	Projected population, 2026	Projected population, 2031	Projected population, 2036	Projected population, 2038
Ontario	Province	10,556,925	\$ 505,836,282	\$ 47,915	\$ 47,915.12							
Algoma	Census Division	92,900	\$ 3,793,412	\$ 40,833	\$ 40,833.28							
Jocelyn	Secondary	315	\$ 12,089	\$ 38,379	\$ 38,377.78							
Hilton	Secondary	285	\$ 10,633	\$ 37,310	\$ 37,308.77							
Hilton Beach	Secondary	N/A	N/A	N/A	N/A							
St. Joseph	Secondary	1,050	\$ 47,786	\$ 45,295	\$ 45,510.48							
Laird	Secondary	855	\$ 40,556	\$ 47,434	\$ 47,433.92							
Tarbutt and Tarbutt Additional	Secondary	405	\$ 22,329	\$ 54,460	\$ 55,133.33							
Johnson	Secondary	545	\$ 17,925	\$ 32,890	\$ 32,889.91							
Plummer Additional	Secondary	520	\$ 18,688	\$ 35,939	\$ 35,938.46							
Bruce Mines	Secondary	495	\$ 19,590	\$ 39,979	\$ 39,575.76							
Macdonald, Meredith and Aberdeen Additional	Secondary	1,280	\$ 55,470	\$ 43,506	\$ 43,335.94							
Sault Ste. Marie	Primary	59,360	\$ 2,501,819	\$ 42,143	\$ 42,146.55							
Prince	Secondary	840	\$ 41,703	\$ 49,646	\$ 49,646.43							
Garden River 14	Secondary	810	\$ 20,905	\$ 25,809	\$ 25,808.64							
Rankin Location 15D	Secondary	N/A	N/A	N/A	N/A							
	Primary Trade Area	59,360	\$ 2,501,819	\$ 42,143	\$ 42,146.55							
	Secondary Trade Area	7,400	\$ 307,674	\$ 41,577	\$ 41,577.57							
	Sault Ste Marie Trade Area	66,760	\$ 2,809,493		\$ 42,083.48							

Population Calculations by Trade Area and sub-geography

Geography	Trade Area Hierarchy	Population, 2016	Share of Census Division population, 2016	Projected population				Projected population, 2038	
				2017	2021	2026	2031		
Ontario	Province	13,448,494	N/A	14,229,546	14,980,422	15,822,463	16,658,591	17,458,005	17,766,884
Algoma	Census Division	114,094	N/A	116,049	114,525	112,192	109,849	107,464	106,520
Jocelyn	Secondary	315	0.3%	320	316	310	303	297	294
Hilton	Secondary	305	0.3%	310	306	300	294	287	285
Hilton Beach	Secondary	170	0.1%	173	171	167	164	160	159
St. Joseph	Secondary	1,240	1.1%	1,261	1,245	1,219	1,194	1,168	1,158
Laird	Secondary	1,050	0.9%	1,068	1,054	1,032	1,011	989	980
Tarbutt and Tarbutt Additional	Secondary	535	0.5%	544	537	526	515	504	499
Johnson	Secondary	750	0.7%	763	753	737	722	706	700
Plummer Additional	Secondary	660	0.6%	671	662	649	635	622	616
Bruce Mines	Secondary	580	0.5%	590	582	570	558	546	541
Macdonald, Meredith and Aberdeen Additional	Secondary	1,610	1.4%	1,638	1,616	1,583	1,550	1,516	1,503
Sault Ste. Marie	Primary	73,368	64.3%	73,647	74,574	75,734	79,978	83,318	84,184
Prince	Secondary	1,010	0.9%	1,027	1,014	993	972	951	943
Garden River 14	Secondary	1,125	1.0%	1,144	1,129	1,106	1,083	1,060	1,050
Rankin Location 15D	Secondary	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Primary Trade Area	73,368	64.3%	73,647	74,574	75,734	79,978	83,318	84,184
	Secondary Trade Area	9,350	8.2%	9,510	9,385	9,194	9,002	8,807	8,729
	Sault Ste Marie Trade Area	82,718	72.5%	83,157	83,960	84,928	88,980	92,124	92,913

Appendix D: Income and Expenditure Estimates by Retail Category and Trade Area

Income and Expenditure Estimates by Trade Area

Income and Expenditure Indices

Trade Area	Per capita income, 2015 dollars	Per capita income index	Per-capita expenditure index, Store Retail	Per-capita expenditure index, Non-food store retail	Per-capita expenditure index, LBW Restaurants
Ontario	\$ 47,915	100.0	100.0	100.0	100.0
Primary Trade Area	\$ 42,143	88.0	98.4	94.6	92.3
Secondary Trade Area	\$ 41,578	86.8	98.3	94.3	91.5
Sault Ste. Marie Trade Area	\$ 42,083	87.8	98.4	94.6	92.2

Population and Expenditure Estimates

Estimated Per-capita Expenditure Levels by Trade Area (2016 dollars)

Trade Area	Estimated per capita expenditure, 2016	Estimated per capita expenditure, FSR	Estimated per capita expenditure, NFSR	Estimated per capita expenditure, General and Specialty Retail	Estimated per capita expenditure, Home Improvement	Estimated per capita expenditure, Retail Alcohol Sales (adjusted)	Estimated per capita expenditure, Restaurants total
Ontario	\$ 2,504	\$ 6,670	\$ 5,818	\$ 852	\$ 647	\$ 1,116	\$ 17,607
Primary Trade Area	\$ 2,465	\$ 6,312	\$ 5,506	\$ 806	\$ 597	\$ 1,096	\$ 16,782
Secondary Trade Area	\$ 2,461	\$ 6,290	\$ 5,487	\$ 803	\$ 591	\$ 1,092	\$ 16,724
Sault Ste. Marie Trade Area	\$ 2,465	\$ 6,310	\$ 5,504	\$ 806	\$ 596	\$ 1,096	\$ 16,776

Population Projections by Trade Area, 2016 to 2038

Trade Area	Estimated Population, 2016	Projected Population, 2017	Projected Population, 2021	Projected Population, 2026	Projected Population, 2031	Projected Population, 2036	Projected Population, 2038
Primary Trade Area	73,368	73,647	74,574	75,734	79,978	83,318	84,184
Secondary Trade Area	9,350	9,510	9,385	9,194	9,002	8,807	8,729
Sault Ste. Marie Trade Area	82,718	83,157	83,960	84,928	88,980	92,124	92,913

Expenditure Potential by Trade Area and Trade Group, 2016 to 2038 (2016 dollars)

Geography	2016	2017	2021	2026	2031	2036	2038
Expenditure Potential	\$ 2,465	\$ 2,471	\$ 2,496	\$ 2,528	\$ 2,559	\$ 2,592	\$ 2,604
Primary Trade Area	\$ 180,871,715	\$ 182,013,103	\$ 186,155,282	\$ 191,424,257	\$ 204,692,667	\$ 215,918,017	\$ 219,254,769
Secondary Trade Area	\$ 23,007,080	\$ 23,459,809	\$ 23,384,113	\$ 23,195,535	\$ 22,896,435	\$ 22,779,769	\$ 22,692,704
Sault Ste. Marie Trade Area	\$ 203,881,761	\$ 205,476,413	\$ 209,541,952	\$ 214,620,995	\$ 227,687,354	\$ 238,693,462	\$ 241,942,344
Share of Food Store Retail sales, supermarkets, supermarkets	\$ 84.2%	\$ 84.2%	\$ 84.2%	\$ 84.2%	\$ 84.2%	\$ 84.2%	\$ 84.2%
Total expenditure, supermarkets	\$ 171,561,553	\$ 172,923,570	\$ 176,345,021	\$ 180,619,411	\$ 191,615,717	\$ 200,878,169	\$ 203,612,343

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Non-food Store Retail

General and Specialty Retail		2016	2017	2021	2026	2031	2036	2038
Trade Area								
Per-capita expenditure	Geography	\$ 5,506	\$ 5,533	\$ 5,645	\$ 5,787	\$ 5,933	\$ 6,083	\$ 6,144
Total expenditure	Primary Trade Area	\$ 403,946,408	\$ 407,509,208	\$ 420,956,150	\$ 438,293,355	\$ 474,548,477	\$ 506,845,489	\$ 517,248,347
Per-capita expenditure	Secondary Trade Area	\$ 5,300	\$ 5,514	\$ 5,625	\$ 5,767	\$ 5,913	\$ 6,062	\$ 6,123
Total expenditure	Secondary Trade Area	\$ 51,300,865	\$ 52,440,600	\$ 52,794,758	\$ 53,025,247	\$ 53,228,867	\$ 53,388,095	\$ 53,449,631
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 5,504	\$ 5,531	\$ 5,643	\$ 5,785	\$ 5,931	\$ 6,081	\$ 6,142
Total expenditure	Sault Ste. Marie Trade Area	\$ 455,259,315	\$ 459,964,294	\$ 473,761,595	\$ 491,325,689	\$ 527,769,856	\$ 560,214,823	\$ 570,675,619

Home Improvement

Trade Area		2016	2017	2021	2026	2031	2036	2038
Per-capita expenditure	Geography	\$ 806	\$ 810	\$ 826	\$ 847	\$ 869	\$ 891	\$ 900
Total expenditure	Primary Trade Area	\$ 59,138,919	\$ 59,660,523	\$ 61,629,194	\$ 64,167,704	\$ 69,475,285	\$ 74,203,641	\$ 75,726,650
Per-capita expenditure	Secondary Trade Area	\$ 803	\$ 807	\$ 824	\$ 844	\$ 866	\$ 888	\$ 896
Total expenditure	Secondary Trade Area	\$ 7,510,555	\$ 7,677,455	\$ 7,729,305	\$ 7,763,049	\$ 7,792,860	\$ 7,816,171	\$ 7,825,180
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 806	\$ 810	\$ 826	\$ 847	\$ 868	\$ 890	\$ 899
Total expenditure	Sault Ste. Marie Trade Area	\$ 66,651,277	\$ 67,340,099	\$ 69,360,064	\$ 71,931,468	\$ 77,267,029	\$ 82,017,066	\$ 83,548,556

Total, Non-food Store Retail

Trade Area		2016	2017	2021	2026	2031	2036	2038
Per-capita expenditure	Geography	\$ 6,312	\$ 6,343	\$ 6,471	\$ 6,635	\$ 6,802	\$ 6,974	\$ 7,044
Total expenditure	Primary Trade Area	\$ 463,085,326	\$ 467,169,731	\$ 483,565,344	\$ 502,463,059	\$ 544,023,742	\$ 581,049,130	\$ 592,974,997
Per-capita expenditure	Secondary Trade Area	\$ 6,290	\$ 6,321	\$ 6,449	\$ 6,612	\$ 6,779	\$ 6,950	\$ 7,019
Total expenditure	Secondary Trade Area	\$ 58,811,231	\$ 60,118,056	\$ 60,524,062	\$ 60,798,296	\$ 61,021,727	\$ 61,204,207	\$ 61,274,811
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 6,310	\$ 6,341	\$ 6,469	\$ 6,632	\$ 6,800	\$ 6,971	\$ 7,041
Total expenditure	Sault Ste. Marie Trade Area	\$ 521,910,591	\$ 527,304,393	\$ 543,121,658	\$ 563,257,186	\$ 605,036,884	\$ 642,231,889	\$ 654,224,175

Retail Alcohol Sales

Trade Area		2016	2017	2021	2026	2031	2036	2038
Per-capita expenditure	Geography	\$ 597	\$ 598	\$ 604	\$ 612	\$ 620	\$ 628	\$ 631
Total expenditure	Primary Trade Area	\$ 43,796,059	\$ 44,072,433	\$ 45,075,416	\$ 46,351,239	\$ 49,564,036	\$ 52,282,128	\$ 53,090,085
Per-capita expenditure	Secondary Trade Area	\$ 591	\$ 593	\$ 599	\$ 606	\$ 614	\$ 622	\$ 625
Total expenditure	Secondary Trade Area	\$ 5,530,313	\$ 5,639,138	\$ 5,620,942	\$ 5,575,813	\$ 5,527,754	\$ 5,475,674	\$ 5,454,745
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 598	\$ 598	\$ 604	\$ 611	\$ 619	\$ 627	\$ 630
Total expenditure	Sault Ste. Marie Trade Area	\$ 49,329,880	\$ 49,715,711	\$ 50,699,382	\$ 51,928,273	\$ 55,089,723	\$ 57,752,688	\$ 58,538,766

Restaurant

Trade Area		2016	2017	2021	2026	2031	2036	2038
Per-capita expenditure	Geography	\$ 1,096	\$ 1,099	\$ 1,110	\$ 1,124	\$ 1,138	\$ 1,152	\$ 1,158
Total expenditure	Primary Trade Area	\$ 80,426,642	\$ 80,934,172	\$ 82,776,039	\$ 85,118,948	\$ 91,018,895	\$ 96,010,374	\$ 97,494,088
Per-capita expenditure	Secondary Trade Area	\$ 1,092	\$ 1,095	\$ 1,106	\$ 1,120	\$ 1,134	\$ 1,148	\$ 1,154
Total expenditure	Secondary Trade Area	\$ 10,209,825	\$ 10,410,834	\$ 10,377,242	\$ 10,293,558	\$ 10,205,201	\$ 10,109,050	\$ 10,070,413
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 1,096	\$ 1,099	\$ 1,110	\$ 1,123	\$ 1,138	\$ 1,152	\$ 1,158
Total expenditure	Sault Ste. Marie Trade Area	\$ 90,639,289	\$ 91,348,220	\$ 93,155,629	\$ 95,413,608	\$ 101,222,492	\$ 106,115,454	\$ 107,559,803

Expenditure Potential by Trade Area, all trade groups, 2016 to 2038 (2016 dollars)

Trade Area		2016	2017	2021	2026	2031	2036	2038
Per-capita expenditure	Geography	\$ 10,470	\$ 10,512	\$ 10,682	\$ 10,898	\$ 11,119	\$ 11,345	\$ 11,437
Total expenditure	Primary Trade Area	\$ 768,179,742	\$ 774,189,439	\$ 796,592,080	\$ 825,357,503	\$ 889,299,340	\$ 945,259,648	\$ 962,813,949
Per-capita expenditure	Secondary Trade Area	\$ 10,434	\$ 10,476	\$ 10,645	\$ 10,861	\$ 11,081	\$ 11,306	\$ 11,398
Total expenditure	Secondary Trade Area	\$ 97,558,549	\$ 99,627,837	\$ 99,906,360	\$ 99,853,000	\$ 99,751,118	\$ 99,568,760	\$ 99,492,672
Per-capita expenditure	Sault Ste. Marie Trade Area	\$ 10,466	\$ 10,508	\$ 10,678	\$ 10,894	\$ 11,115	\$ 11,341	\$ 11,433
Total expenditure	Sault Ste. Marie Trade Area	\$ 865,761,522	\$ 873,844,738	\$ 896,518,621	\$ 925,220,662	\$ 989,036,454	\$ 1,044,793,493	\$ 1,062,265,088

Appendix E: Retail Mapping

Appendix F: Estimated Residual Demand

Estimated Residual Demand

Table 1: Food and Convenience Retail

Expenditure Potential	2016	2017	2021	2026	2031	2036	2038
Trade Area							
Primary Trade Area	\$ 180,871,715	\$ 182,013,103	\$ 186,155,282	\$ 191,424,257	\$ 204,632,667	\$ 215,918,017	\$ 219,254,769
Local capture rate	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
Primary Trade Area	\$ 171,828,129	\$ 172,912,447	\$ 176,847,518	\$ 181,853,044	\$ 194,458,033	\$ 205,122,116	\$ 208,292,031
Estimated total local capture of potential expenditure							
Total expenditure potential	\$ 23,007,080	\$ 23,459,809	\$ 23,384,113	\$ 23,195,535	\$ 22,996,435	\$ 22,779,769	\$ 22,692,704
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Secondary Trade Area	\$ 11,503,540	\$ 11,729,905	\$ 11,692,057	\$ 11,597,768	\$ 11,498,218	\$ 11,389,885	\$ 11,346,352
Estimated total local capture of potential expenditure							
Secondary Trade Area	\$ 183,331,669	\$ 184,642,352	\$ 188,539,574	\$ 193,450,812	\$ 205,956,251	\$ 216,512,001	\$ 219,638,382
Sault Ste. Marie Trade Area	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Estimated total local expenditure potential (pre-inflow)							
Expenditure in-flow rate							
Estimated total local expenditure potential (with inflow)	\$ 215,684,317	\$ 217,226,297	\$ 221,811,264	\$ 227,589,191	\$ 242,301,472	\$ 254,720,001	\$ 258,398,097

Residual Sales Demand

Residual Sales Demand	2016	2017	2021	2026	2031	2036	2038
Trade Area							
Primary Trade Area	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000
Local capture rate	51%	51%	51%	51%	51%	51%	51%
Primary Trade Area	\$ 215,684,317	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297
Estimated total local capture of potential space inventory							
Total sales supported by available space inventory	\$ -	\$ -	\$ 4,584,967	\$ 10,362,894	\$ 25,075,175	\$ 37,493,704	\$ 41,171,800
Residual sales demand							

Residual/Warranted Space Demand

Residual/Warranted Space Demand	2016	2017	2021	2026	2031	2036	2038
Sales Efficiency Scenario							
Lower	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500	\$ 500
Local capture rate	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Lower	\$ 0	\$ 0	\$ 9,170	\$ 20,726	\$ 50,150	\$ 74,987	\$ 82,344
Estimated total local capture of potential space demand							
Medium	\$ 515	\$ 515	\$ 515	\$ 515	\$ 515	\$ 515	\$ 515
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Medium	\$ 0	\$ 0	\$ 8,903	\$ 20,122	\$ 48,690	\$ 72,803	\$ 79,945
Estimated total local capture of potential space demand							
Higher	\$ 530	\$ 530	\$ 530	\$ 530	\$ 530	\$ 530	\$ 530
Local capture rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Higher	\$ 0	\$ 0	\$ 8,651	\$ 19,553	\$ 47,312	\$ 70,743	\$ 77,683
Estimated total local capture of potential space demand							

Table 2: General and Specialty Retail

Expenditure Potential	2016	2017	2021	2026	2031	2036	2038
Trade Area							
Primary Trade Area	\$ 403,946,408	\$ 407,509,208	\$ 420,956,150	\$ 438,295,355	\$ 474,548,477	\$ 506,845,489	\$ 517,248,347
Local capture rate	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Primary Trade Area	\$ 302,959,806	\$ 305,631,906	\$ 315,717,112	\$ 328,721,516	\$ 355,911,358	\$ 380,134,116	\$ 387,936,261
Estimated total local capture of potential expenditure							
Total expenditure potential	\$ 51,300,665	\$ 52,440,600	\$ 52,794,758	\$ 53,025,247	\$ 53,228,867	\$ 53,388,095	\$ 53,449,631
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Secondary Trade Area	\$ 25,650,333	\$ 26,220,300	\$ 26,397,379	\$ 26,512,623	\$ 26,614,434	\$ 26,694,048	\$ 26,724,815
Estimated total local capture of potential expenditure							
Secondary Trade Area	\$ 328,610,138	\$ 331,852,206	\$ 342,114,491	\$ 355,234,140	\$ 382,525,791	\$ 406,828,164	\$ 414,661,076
Sault Ste. Marie Trade Area	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Estimated total local expenditure potential (pre-inflow)							
Expenditure in-flow rate							
Estimated total local expenditure potential (with inflow)	\$ 410,762,673	\$ 414,815,257	\$ 427,643,114	\$ 444,042,675	\$ 478,157,239	\$ 508,535,205	\$ 518,326,345

Residual Sales Demand

Residual Sales Demand	2016	2017	2021	2026	2031	2036	2038
Trade Area							
Primary Trade Area	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000	\$ 422,000
Local capture rate	51%	51%	51%	51%	51%	51%	51%
Primary Trade Area	\$ 215,684,317	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297	\$ 217,226,297
Estimated total local capture of potential space inventory							
Total sales supported by available space inventory	\$ -	\$ -	\$ 4,584,967	\$ 10,362,894	\$ 25,075,175	\$ 37,493,704	\$ 41,171,800
Residual sales demand							

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Trade Area	2016	2017	2021	2026	2031	2036	2038
Space inventory, sq.ft. GLA	1,388,000	1,388,000	1,264,074	1,264,074	1,264,074	1,264,074	1,264,074
Rates of sales per sq.ft. GLA	296 \$	299 \$	299 \$	299 \$	299 \$	299 \$	299 \$
Total sales supported by available space inventory	\$ 410,762,673	\$ 414,815,257	\$ 377,778,949	\$ 377,778,949	\$ 377,778,949	\$ 377,778,949	\$ 377,778,949
Residual sales demand	\$ -	\$ -	\$ 49,864,164	\$ 66,263,725	\$ 100,378,290	\$ 130,756,256	\$ 140,547,395

Residual/Warranted Space Demand

Sales Efficiency Scenario	2016	2017	2021	2026	2031	2036	2038
Lower	290 \$	290 \$	290 \$	290 \$	290 \$	290 \$	290 \$
Medium	300 \$	300 \$	300 \$	300 \$	300 \$	300 \$	300 \$
Higher	310 \$	310 \$	310 \$	310 \$	310 \$	310 \$	310 \$

Table 3: Home Improvement

Trade Area	2016	2017	2021	2026	2031	2036	2038
Total expenditure potential	\$ 59,136,919	\$ 59,660,523	\$ 61,629,194	\$ 64,167,704	\$ 69,475,265	\$ 74,203,641	\$ 75,726,650
Local capture rate	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Estimated total local capture of potential expenditure	\$ 44,354,189	\$ 44,745,392	\$ 46,221,896	\$ 48,125,778	\$ 52,106,449	\$ 55,652,731	\$ 56,794,987
Total expenditure potential	\$ 7,510,565	\$ 7,677,455	\$ 7,729,305	\$ 7,763,049	\$ 7,792,860	\$ 7,816,171	\$ 7,825,180
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Estimated total local capture of potential expenditure	\$ 3,755,283	\$ 3,838,728	\$ 3,864,652	\$ 3,881,525	\$ 3,896,430	\$ 3,908,086	\$ 3,912,590
Estimated total local expenditure potential (pre-inflow)	\$ 48,109,472	\$ 48,584,120	\$ 50,086,548	\$ 52,007,302	\$ 56,002,879	\$ 59,560,816	\$ 60,707,577
Expenditure in-flow rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Estimated total local expenditure potential (with inflow)	\$ 60,136,840	\$ 60,730,150	\$ 62,608,185	\$ 65,009,128	\$ 70,003,599	\$ 74,451,020	\$ 75,884,472

Residual Sales Demand

Trade Area	2016	2017	2021	2026	2031	2036	2038
Space inventory, sq.ft. GLA	331,000	331,000	331,000	331,000	331,000	331,000	331,000
Rates of sales per sq.ft. GLA	182 \$	183 \$	183 \$	183 \$	183 \$	183 \$	183 \$
Total sales supported by available space inventory	\$ 60,136,840	\$ 60,730,150	\$ 60,730,150	\$ 60,730,150	\$ 60,730,150	\$ 60,730,150	\$ 60,730,150
Residual sales demand	\$ -	\$ -	\$ 1,878,035	\$ 4,278,978	\$ 9,273,449	\$ 13,720,871	\$ 15,154,322

Residual/Warranted Space Demand

Sales Efficiency Scenario	2016	2017	2021	2026	2031	2036	2038
Lower	175 \$	175 \$	175 \$	175 \$	175 \$	175 \$	175 \$
Medium	185 \$	185 \$	185 \$	185 \$	185 \$	185 \$	185 \$
Higher	195 \$	195 \$	195 \$	195 \$	195 \$	195 \$	195 \$



Table 4: Retail Alcohol Sales

	2016	2017	2021	2026	2031	2036	2038
Expenditure Potential							
Total expenditure potential	\$ 43,796,059	\$ 44,072,433	\$ 45,075,416	\$ 46,351,239	\$ 49,564,036	\$ 52,282,128	\$ 53,090,085
Local capture rate	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Estimated total local capture of potential expenditure	\$ 30,657,241	\$ 30,850,703	\$ 31,552,791	\$ 32,445,867	\$ 34,694,825	\$ 36,597,490	\$ 37,163,060
Total expenditure potential	\$ 5,530,313	\$ 5,639,138	\$ 5,620,942	\$ 5,575,613	\$ 5,527,754	\$ 5,475,674	\$ 5,454,745
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Estimated total local capture of potential expenditure	\$ 2,765,157	\$ 2,819,569	\$ 2,810,471	\$ 2,787,806	\$ 2,763,877	\$ 2,737,837	\$ 2,727,373
Estimated total local expenditure potential (pre-inflow)	\$ 33,422,398	\$ 33,670,272	\$ 34,363,262	\$ 35,233,674	\$ 37,458,702	\$ 39,335,327	\$ 39,890,432
Expenditure in-flow rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Estimated total local expenditure potential (with inflow)	\$ 41,777,997	\$ 42,087,840	\$ 42,954,077	\$ 44,042,092	\$ 46,823,378	\$ 49,169,158	\$ 49,863,040

Residual Sales Demand

Trade Area	2016	2017	2021	2026	2031	2036	2038
Primary Trade Area	43,000	43,000	43,000	43,000	43,000	43,000	43,000
Primary Trade Area	972	979	979	979	979	979	979
Total sales supported by available space inventory	\$ 41,777,997	\$ 42,087,840	\$ 42,087,840	\$ 42,087,840	\$ 42,087,840	\$ 42,087,840	\$ 42,087,840
Residual sales demand	\$ -	\$ -	\$ 866,237	\$ 1,954,252	\$ 4,735,537	\$ 7,081,318	\$ 7,775,200

Residual/Warranted Space Demand

Sales Efficiency Scenario	2016	2017	2021	2026	2031	2036	2038
Lower	960	960	960	960	960	960	960
Lower	0	0	902	2,036	4,933	7,376	8,099
Medium	980	980	980	980	980	980	980
Medium	0	0	884	1,994	4,832	7,226	7,934
Higher	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Higher	0	0	866	1,954	4,736	7,081	7,775

Table 5: Restaurant

	2016	2017	2021	2026	2031	2036	2038
Expenditure Potential							
Total expenditure potential	\$ 80,426,642	\$ 80,934,172	\$ 82,776,039	\$ 85,118,948	\$ 91,018,895	\$ 96,010,374	\$ 97,494,098
Local capture rate	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%	85.0%
Estimated total local capture of potential expenditure	\$ 68,362,645	\$ 68,794,046	\$ 70,359,633	\$ 72,351,106	\$ 77,366,061	\$ 81,608,818	\$ 82,869,983
Total expenditure potential	\$ 10,209,925	\$ 10,410,834	\$ 10,377,242	\$ 10,293,556	\$ 10,205,201	\$ 10,109,050	\$ 10,070,413
Local capture rate	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
Estimated total local capture of potential expenditure	\$ 5,104,962	\$ 5,205,417	\$ 5,188,621	\$ 5,146,778	\$ 5,102,601	\$ 5,054,525	\$ 5,035,207
Estimated total local expenditure potential (pre-inflow)	\$ 73,467,608	\$ 73,999,463	\$ 75,548,254	\$ 77,497,884	\$ 82,468,662	\$ 86,663,343	\$ 87,905,190
Expenditure in-flow rate	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%
Estimated total local expenditure potential (with inflow)	\$ 91,834,510	\$ 92,499,329	\$ 94,435,318	\$ 96,872,355	\$ 103,085,827	\$ 108,329,179	\$ 109,881,487

Residual Sales Demand

Trade Area	2016	2017	2021	2026	2031	2036	2038
Primary Trade Area	299,000	299,000	299,000	299,000	299,000	299,000	299,000
Primary Trade Area	307	309	309	309	309	309	309
Total sales supported by available space inventory	\$ 299,000	\$ 299,000	\$ 299,000	\$ 299,000	\$ 299,000	\$ 299,000	\$ 299,000
Residual sales demand	\$ 307	\$ 309	\$ 309	\$ 309	\$ 309	\$ 309	\$ 309



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Total sales supported by available space inventory	\$ 91,834,510	\$ 92,499,329	\$ 92,499,329	\$ 92,499,329	\$ 92,499,329	\$ 92,499,329	\$ 92,499,329	\$ 92,499,329
Residual sales demand	\$ -	\$ -	\$ 1,935,988	\$ 4,373,026	\$ 10,586,498	\$ 15,829,849	\$ 17,382,158	\$ 17,382,158

Residual/Warranted Space Demand

	Sales Efficiency Scenario		2016	2017	2021	2026	2031	2036	2038
Rate of sales per sq.ft. GLA	Lower	Lower	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300	\$ 300
Residual demand (sq.ft.)	Lower	Lower	0	0	6,453	14,577	35,288	52,766	57,941
Rate of sales per sq.ft. GLA	Medium	Medium	\$ 310	\$ 310	\$ 310	\$ 310	\$ 310	\$ 310	\$ 310
Residual demand (sq.ft.)	Medium	Medium	0	0	6,245	14,107	34,150	51,064	56,071
Rate of sales per sq.ft. GLA	Higher	Higher	\$ 320	\$ 320	\$ 320	\$ 320	\$ 320	\$ 320	\$ 320
Residual demand (sq.ft.)	Higher	Higher	0	0	6,050	13,666	33,083	49,468	54,319

Table 6: E-commerce Adjustments by Retail Category

Food Store Retail

	Sales Efficiency Scenario		2016	2017	2021	2026	2031	2036	2038
E-commerce adjustment factor	Lower	Lower	2.25%	2.75%	3.50%	4.00%	4.50%	5.00%	5.25%
Residual space demand, low rate of sales per sq.ft.	Lower	Lower	0	0	8,849	19,897	47,894	71,238	78,021
Residual space demand, medium rate of sales per sq.ft.	Medium	Medium	0	0	8,591	19,317	46,499	69,163	75,748
Residual space demand, high rate of sales per sq.ft.	Higher	Higher	0	0	8,348	18,771	45,183	67,206	73,604

General and Specialty Retail

	Sales Efficiency Scenario		2016	2017	2021	2026	2031	2036	2038
E-commerce adjustment factor	Lower	Lower	4.50%	5.50%	7.00%	8.00%	9.00%	10.00%	10.50%
Residual space demand, low rate of sales per sq.ft.	Lower	Lower	0	0	159,909	210,216	314,980	405,795	433,758
Residual space demand, medium rate of sales per sq.ft.	Medium	Medium	0	0	154,579	203,209	304,481	392,269	419,300
Residual space demand, high rate of sales per sq.ft.	Higher	Higher	0	0	149,592	196,654	294,659	379,615	405,774

Home Improvement

	Sales Efficiency Scenario		2016	2017	2021	2026	2031	2036	2038
E-commerce adjustment factor	Lower	Lower	2.25%	2.75%	3.50%	4.00%	4.50%	5.00%	5.25%
Residual space demand, low rate of sales per sq.ft.	Lower	Lower	0	0	4,777	10,720	25,843	38,441	42,097
Residual space demand, medium rate of sales per sq.ft.	Medium	Medium	0	0	4,518	10,141	24,446	36,364	39,822
Residual space demand, high rate of sales per sq.ft.	Higher	Higher	0	0	4,287	9,621	23,192	34,499	37,779

Retail Alcohol Sales

	Sales Efficiency Scenario		2016	2017	2021	2026	2031	2036	2038
E-commerce adjustment factor	Lower	Lower	0.00%	0.10%	1.00%	2.00%	3.00%	4.00%	4.50%
Residual space demand, low rate of sales per sq.ft.	Lower	Lower	0	0	893	1,995	4,785	7,081	7,735
Residual space demand, medium rate of sales per sq.ft.	Medium	Medium	0	0	875	1,954	4,687	6,937	7,577
Residual space demand, high rate of sales per sq.ft.	Higher	Higher	0	0	858	1,915	4,593	6,798	7,425

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Restaurant	Sales Efficiency Scenario						
	2016	2017	2021	2028	2031	2036	2038
E-commerce adjorment factor	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Residual space demand, low rate of sales per sq.ft.	0	0	6,453	14,577	35,288	52,766	57,941
Residual space demand, medium rate of sales per sq.ft.	0	0	6,245	14,107	34,150	51,064	56,071
Residual space demand, high rate of sales per sq.ft.	0	0	6,050	13,666	33,083	49,468	54,319

Table 7: Total Residual Retail Space and Land Demands

Total Residual Demand (without Vacancy Reuptake Adjustment)	Sales Efficiency Scenario						
	2016	2017	2021	2026	2031	2036	2038
Residual Space Demand	0	0	180,881	257,405	428,789	575,322	619,551
Residual retail space demand, sq.ft.	0	0	174,809	248,728	414,262	555,796	598,518
Residual retail space demand, sq.ft.	0	0	169,135	240,626	400,710	537,586	578,902

Vacancy Reuptake Adjustment	Sales Efficiency Scenario						
	2016	2017	2021	2026	2031	2036	2038
Vacancy Adjustments	305,000	305,000	428,926	428,926	428,926	428,926	428,926
Estimated vacancy (sq.ft.)	50.0%	50.0%	50.0%	52.5%	55.0%	57.5%	58.8%
Assumed vacancy reuptake rate	152,500	152,500	214,463	225,186	235,909	246,632	251,994

Total Residual Space Demand by Sales Efficiency Scenario	Sales Efficiency Scenario						
	2016	2017	2021	2026	2031	2036	2038
Residual Space Demand	0	0	-33,582	32,219	192,880	328,690	367,557
Total residual space demand, retail, sq.ft.	0	0	-39,654	23,542	178,353	309,164	346,524
Total residual space demand, retail, sq.ft.	0	0	-45,328	15,440	164,800	290,953	326,908

Residual Land Demand - Lower Sales Efficiency	Land Coverage Rate						
	2016	2017	2021	2026	2031	2036	2038
Residual Land Demand	25.0%	0.0	-1.2	1.2	7.2	12.2	13.7
Total residual land demand, retail, hectares	25.0%	0.0	-3.1	3.0	17.7	30.2	33.8
Total residual land demand, retail, acres	30.0%	0.0	-1.0	1.0	6.0	10.2	11.4
Total residual land demand, retail, acres	30.0%	0.0	-2.6	2.5	14.8	25.2	28.1

Residual Land Demand - Medium Sales Efficiency	Land Coverage Rate						
	2016	2017	2021	2026	2031	2036	2038
Residual Land Demand	25.0%	0.0	-1.5	0.9	6.6	11.5	12.9
Total residual land demand, retail, hectares	25.0%	0.0	-1.5	0.9	6.6	11.5	12.9

Last revised: 5/3/2018
File 17-6013

Appendix: Estimated Residual Demand

Sault Ste. Marie Retail Study

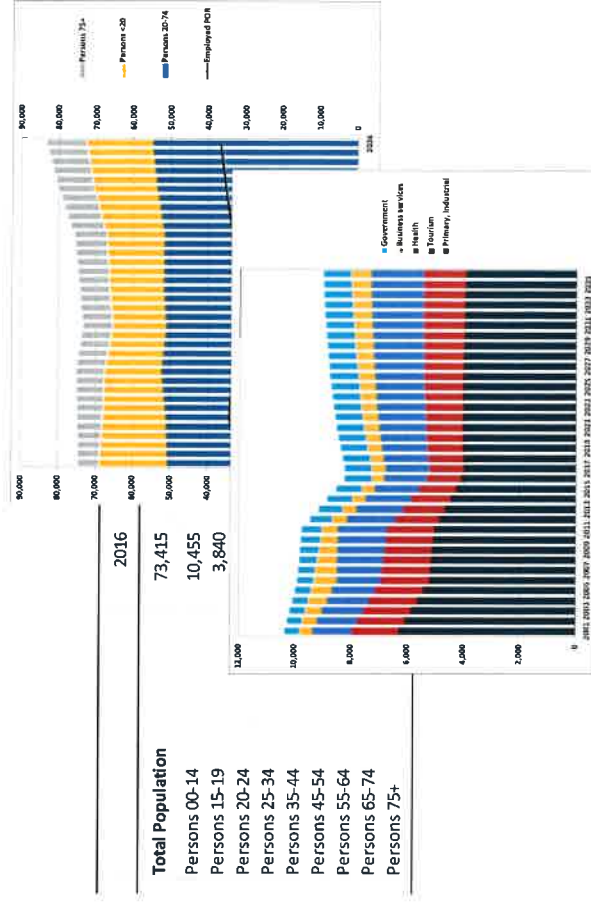
	2016	2017	2021	2026	2031	2036	2038
Total residual land demand, retail, acres	0.0	0.0	-3.6	2.2	16.4	28.4	31.8
Total residual land demand, retail, hectares	0.0	0.0	-1.2	0.7	5.5	9.6	10.7
Total residual land demand, retail, acres	0.0	0.0	-3.0	1.8	13.6	23.7	26.5

Residual Land Demand - Higher Sales Efficiency

	Land Coverage Rate						
Residual Land Demand	2016	2017	2021	2026	2031	2036	2038
Total residual land demand, retail, hectares	0.0	0.0	-1.7	0.6	6.1	10.8	12.1
Total residual land demand, retail, acres	0.0	0.0	-4.2	1.4	15.1	26.7	30.0
Total residual land demand, retail, hectares	0.0	0.0	-1.4	0.5	5.1	9.0	10.1
Total residual land demand, retail, acres	0.0	0.0	-3.5	1.2	12.8	22.3	25.0

Sault Ste. Marie, Ontario Population and Employment Projections to 2036

January 2019



Sault Ste. Marie's Employment in 2016

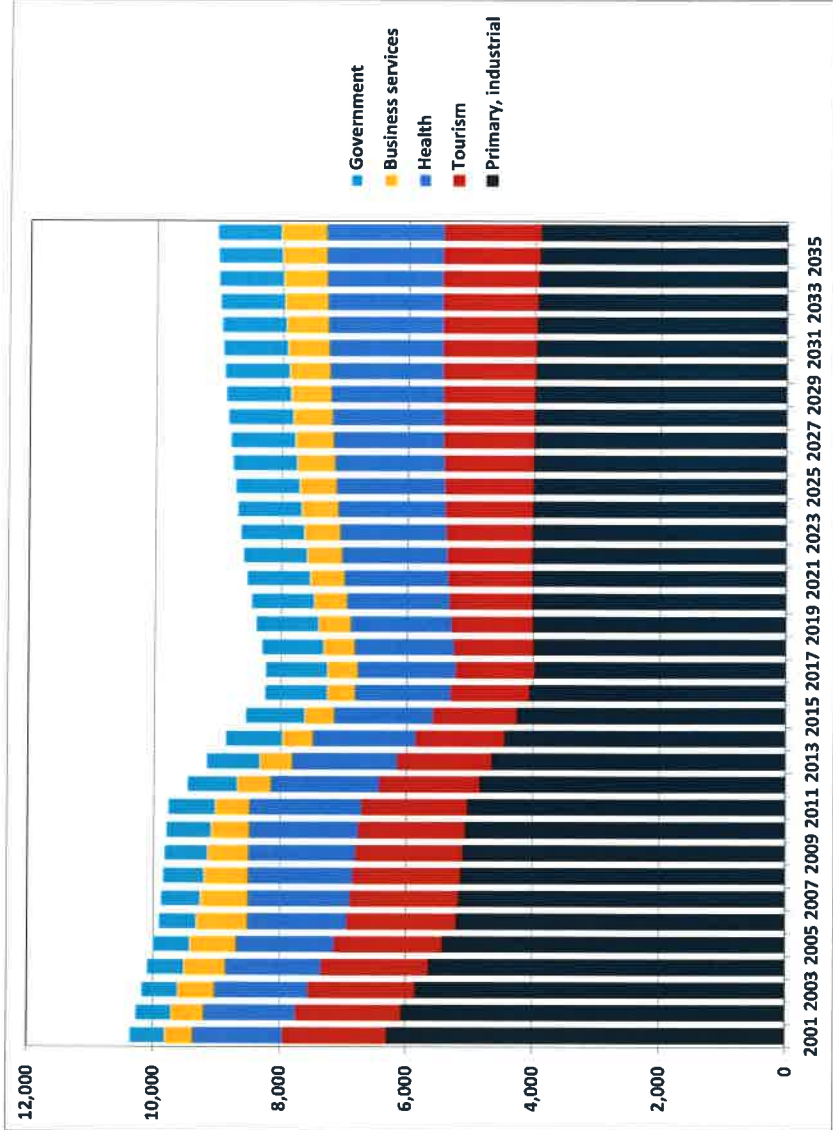
Sault Ste. Marie's Economic Base
8,265 of 31,045 jobs by place-of-work account for Sault Ste. Marie's economic base (27% of total EPOW)
manufacturing (3,605)
health, social services (1,523)
tourism (1,252)
all other (1,885)

within manufacturing
primary metals (2,610)
wood products (215)
fabricated metals (160)
all other (620)

Population and employment by industry	Ontario		Sault Ste. Marie		Sault Ste. Marie		SSM EB%
	Employed	/ 1,000	Employed	/ 1,000	EB	CB	
Total population	13,448,494	---	73,368	---	---	---	---
Total employment by place-of-work	5,867,270	436	31,045	444	8,265	22,780	27
Agriculture, other primary	88,450	7	110	2	110	0	100
Mining, oil and gas	24,705	2	75	0	75	0	100
Utilities	43,785	3	310	4	55	255	18
Construction	213,400	16	1,015	19	232	783	23
Manufacturing	624,260	46	3,605	60	3,605	0	100
Wholesale trade	238,335	18	565	10	0	565	0
Retail trade	707,530	53	4,450	62	739	3,711	17
Transportation, warehousing	232,090	17	955	13	0	955	0
Information, culture	153,455	11	360	4	0	360	0
Finance, insurance	483,235	36	1,355	19	0	1,355	0
Professional, scientific, technical services	497,790	37	1,110	16	0	1,110	0
Other business services	234,280	17	1,745	23	430	1,315	25
Education	460,690	34	2,460	34	0	2,460	0
Health, social services	680,110	51	5,410	71	1,523	3,887	28
Arts, entertainment, recreation	119,330	9	1,125	16	513	612	46
Accommodation, food	420,400	31	2,630	31	0	2,630	0
Other services	257,000	19	1,215	18	0	1,215	0
Government	388,425	29	2,550	42	983	1,567	39

Source: 2016 Census

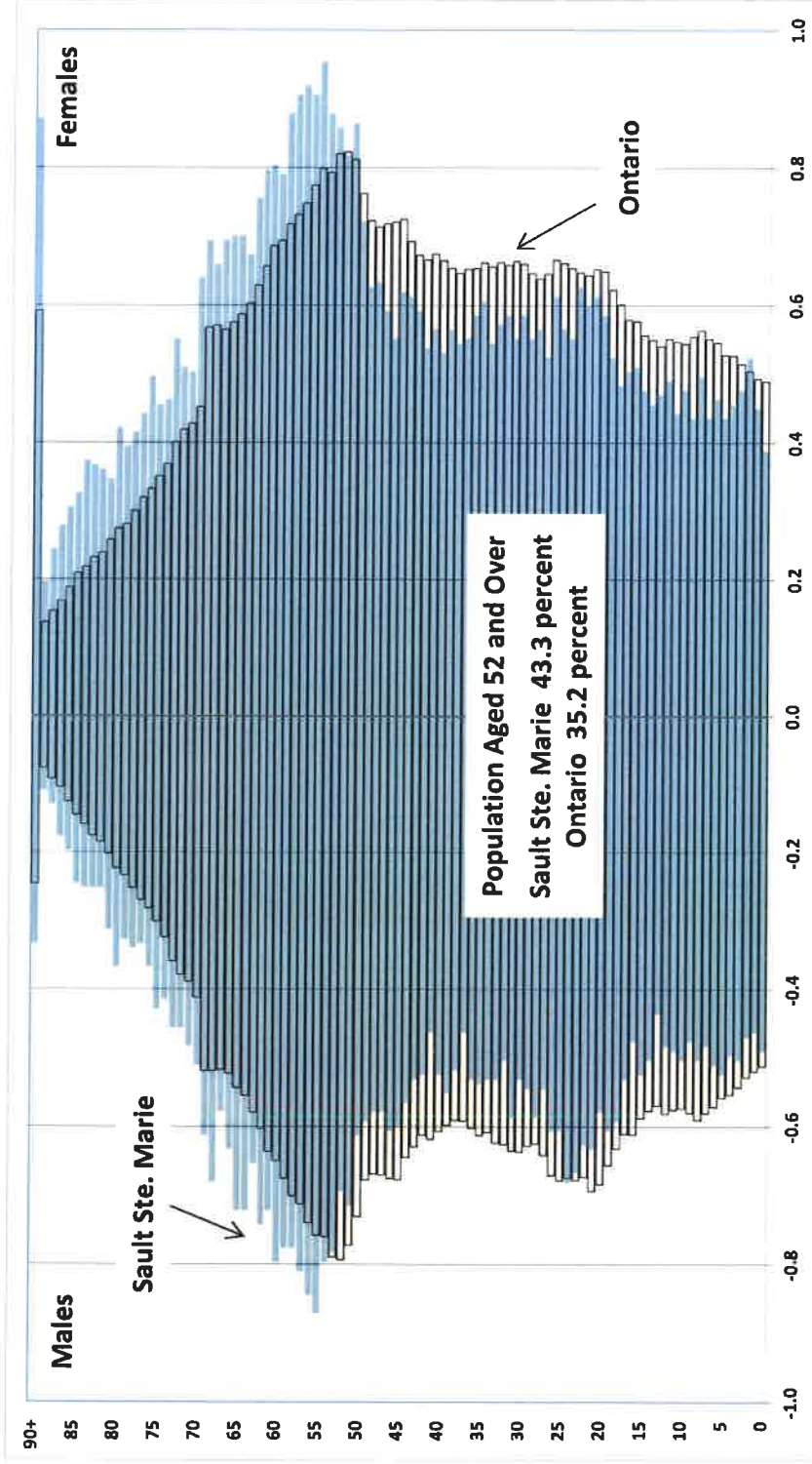
Sault Ste. Marie's Economic Base Employment 2001 to 2036



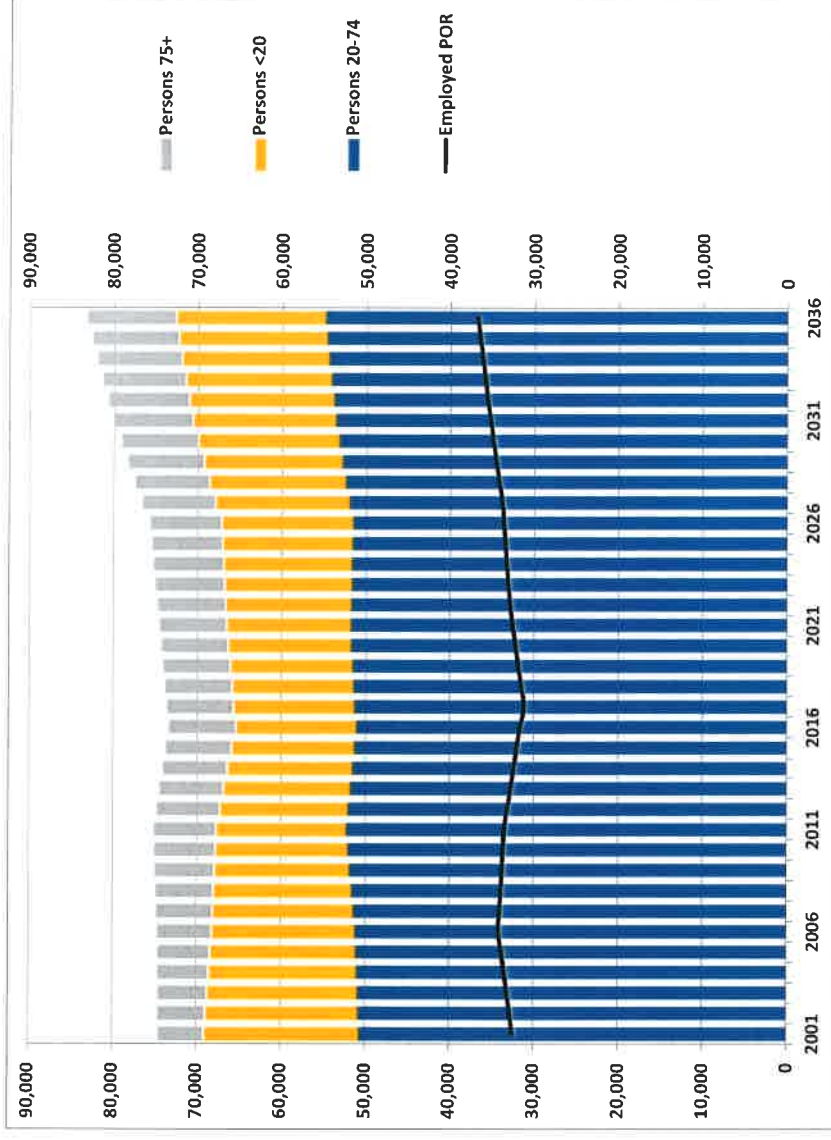
Sources: Statistics Canada and metro economics

Sault Ste. Marie's Economic Base Employment	
2016	8,265
2036	9,055

Population by Age and Gender as a Percent Share of the Total in 2016



Sault Ste. Marie Total Population Projections



Source: Censuses of Canada and metro economics

Total Population

2016 73,400

2036 83,300

Up 9,900

Population 20-74

2016 51,200

2036 55,000

Up 3,800

Total EPOR

2016 31,700

2036 36,800

Up 5,100

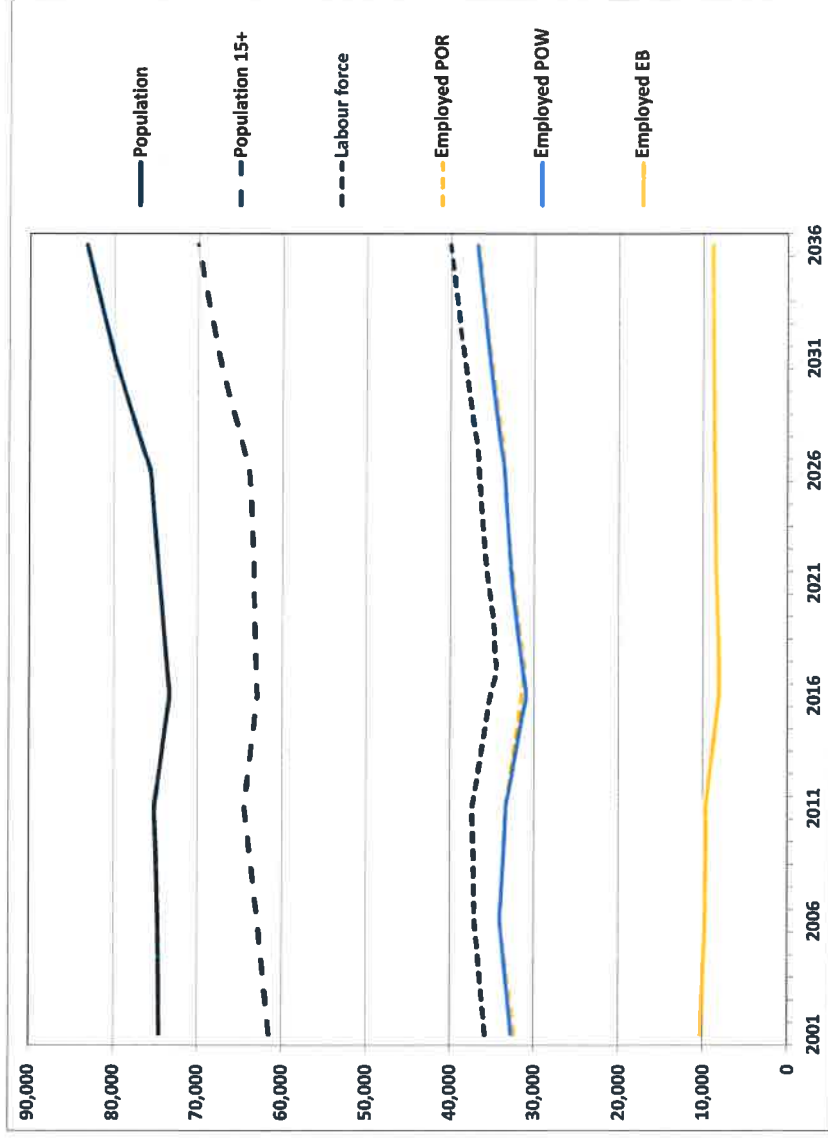
EPOR / Pop 20-74

2016 0.618

2036 0.668

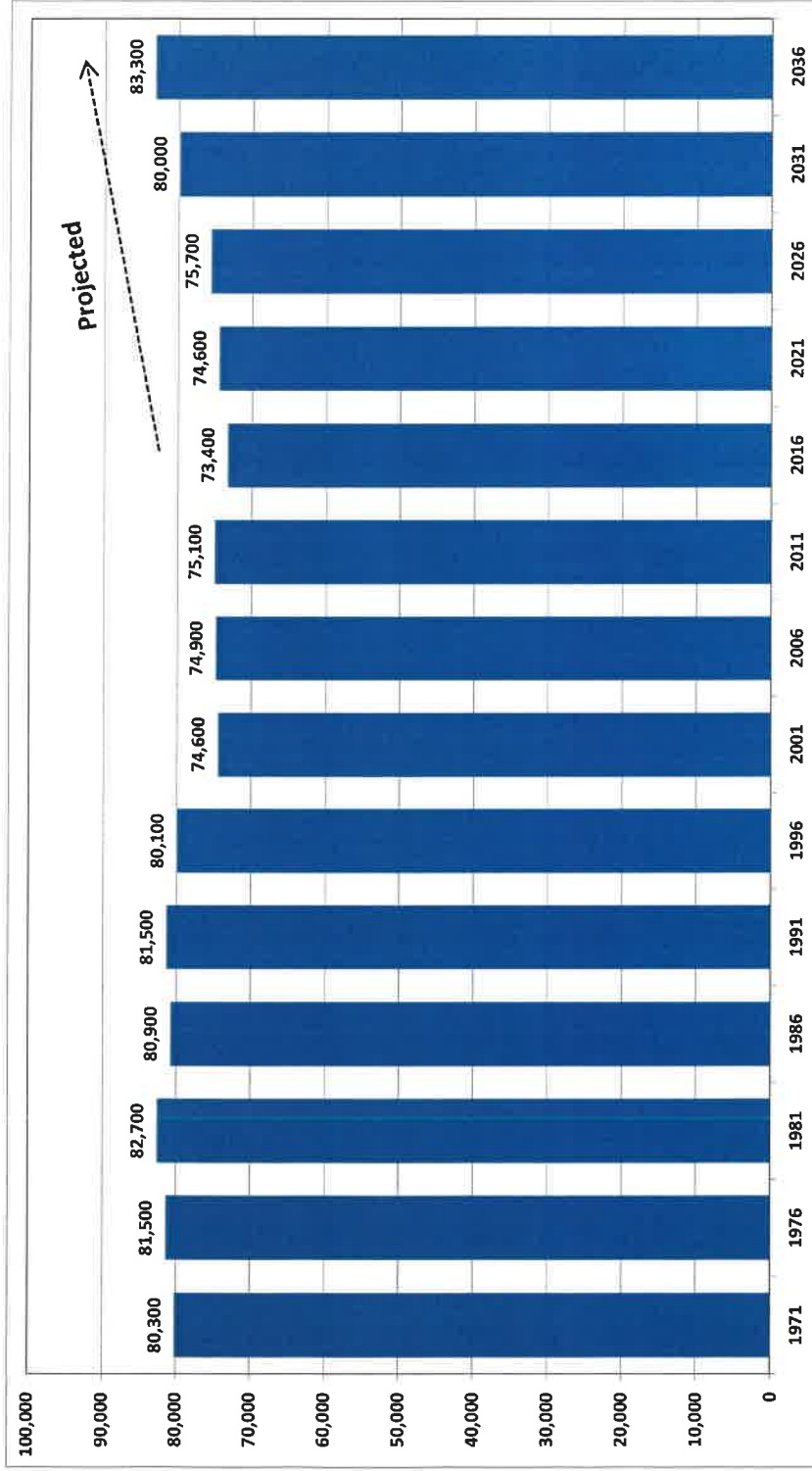
Up 0.050

Sault Ste. Marie Total Population Projections



Source: Censuses of Canada and metro economics

Sault Ste. Marie Total Population Projections



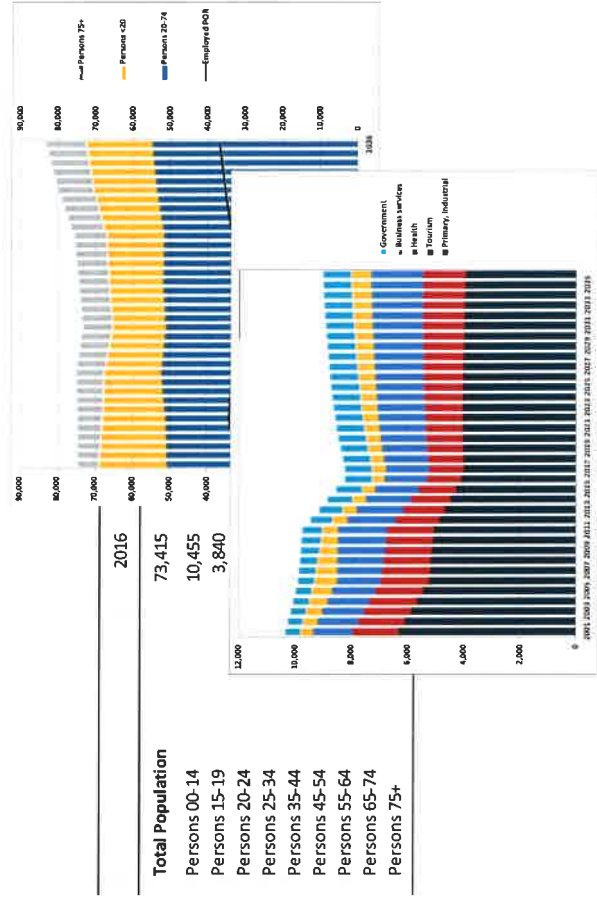
Source: Censuses of Canada and metro economics

Sault Ste. Marie Population and Employment Projections by Component

	2016	2036	Change
Total Population	73,415	83,310	9,895
Persons 00-14	10,455	13,210	2,755
Persons 15-19	3,840	4,510	670
Persons 20-24	4,525	4,530	5
Persons 25-34	8,245	8,380	135
Persons 35-44	8,005	11,400	3,395
Persons 45-54	10,075	11,060	985
Persons 55-64	11,820	9,590	-2,230
Persons 65-74	8,570	10,080	1,510
Persons 75+	7,880	10,550	2,670
Total employed by place-of-work	31,045	36,940	5,895
Agriculture, forestry	110	70	-40
Mining, oil and gas	75	90	15
Utilities	310	350	40
Construction	1,015	1,680	665
Manufacturing	3,605	3,320	-285
Wholesale trade	565	780	215
Retail trade	4,450	4,630	180
Transportation, warehousing	955	1,090	135
Information, culture	360	320	-40
Finance, insurance, real estate	1,355	1,530	175
Professional, scientific, technical services	1,110	1,740	630
Other business services	1,745	2,850	1,105
Education	2,460	3,040	580
Health, social services	5,410	6,660	1,250
Arts, entertainment, recreation	1,125	1,720	595
Accommodation, food	2,630	3,270	640
Other services	1,215	1,170	-45
Government	2,550	2,630	80

Source: Censuses of Canada and metro economics

Tom McCormack
 tom@metroeconomics.ca
 (905) 466-0454



City of Sault Ste. Marie - Waste Management EA
Projected Waste Generation, Diversion and Remaining Disposal Capacity

Year	Population (Note 4)	Residential Waste Generation Rate (tonnes/ person/yr) (Note 1)	Overall Residential Diversion Rate (%) (Note 5)	IC&I Waste Disposal Rate (Post Diversion Residual Waste) (tonnes/ person/yr)	Municipal Biosolids Generation Rate (tonnes/ person/yr)	Municipal Biosolids Diversion Rate (%)	Total Waste to be Managed (tonnes)	Total Waste Diverted (tonnes)	Total Residual Waste (tonnes)	Remaining Disposal Capacity at Year End (tonnes)
Ten Year Averages (Note 2)	74312	0.441	30 (Note 3)	0.564	0.133	0	84567	9831	74736	
Existing Proportion of Waste Stream		38.8%		49.6%	11.6%					
Proposed Proportion of the Waste Stream		0.450		0.600	0.135					
Proposed Proportion of the Waste Stream		38.1%		50.5%	11.4%					
2021	76270	0.450	30	0.600	0.135	0	90136	10296	79839	217333
2022	76536	0.450	30	0.600	0.135	0	90450	10332	80118	137215
2023	76802	0.450	30	0.600	0.135	0	90765	10368	80397	56818
2024	77069	0.450	30	0.600	0.135	0	91080	10404	80675	-23857
2025	77335	0.450	50	0.600	0.135	100	91394	27841	63554	-87411
2026	77601	0.450	50	0.600	0.135	100	91709	27936	63773	-151183
2027	78454	0.450	50	0.600	0.135	100	92717	28244	64474	-215657
2028	79308	0.450	50	0.600	0.135	100	93726	28551	65175	-280832
2029	80161	0.450	50	0.600	0.135	100	94735	28858	65876	-346709
2030	81015	0.450	50	0.600	0.135	100	95743	29165	66578	-413287
2031	81868	0.450	50	0.600	0.135	100	96752	29472	67279	-480566
2032	82540	0.450	50	0.600	0.135	100	97546	29714	67832	-548397
2033	83212	0.450	50	0.600	0.135	100	98340	29956	68384	-616781
2034	83885	0.450	50	0.600	0.135	100	99135	30198	68936	-685718
2035	84557	0.450	50	0.600	0.135	100	99929	30440	69489	-755206
2036	85229	0.450	50	0.600	0.135	100	100724	30682	70041	-825248
2037	85766	0.450	50	0.600	0.135	100	101359	30876	70483	-895730
2038	86307	0.450	50	0.600	0.135	100	101998	31071	70927	-966658
2039	86851	0.450	50	0.600	0.135	100	102641	31266	71374	-1038032
2040	87399	0.450	50	0.600	0.135	100	103288	31464	71824	-1109856
2041	87950	0.450	50	0.600	0.135	100	103939	31662	72277	-1182134
2042	88505	0.450	50	0.600	0.135	100	104595	31862	72733	-1254867
2043	89063	0.450	50	0.600	0.135	100	105254	32063	73192	-1328058
2044	89624	0.450	50	0.600	0.135	100	105918	32265	73653	-1401712
2045	90190	0.450	50	0.600	0.135	100	106586	32468	74118	-1475829
2046	90758	0.450	50	0.600	0.135	100	107258	32673	74585	-1550415
2047	91331	0.450	50	0.600	0.135	100	107935	32879	75056	-1625470
2048	91907	0.450	50	0.600	0.135	100	108616	33086	75529	-1701000
2049	92487	0.450	50	0.600	0.135	100	109301	33295	76006	-1777005

NOTES:

1. It is estimated that approximately 25% - 30% of the overall residential waste stream is organic in nature.
2. Historical ten year average values reflect the City of Sault Ste. Marie only.
3. The ten year average diversion rate is estimated and incorporates adjustments to address historical anomalies with datacall reporting.
4. Population projections include City of Sault Ste. Marie, Prince Township and Rankin Reserve.
5. Waste diversion rate projections assume a Source Separated Organic Program is initiated in 2025.