10.14.2009

Border Economic Impact on Blue Water Area, Michigan

The Canada-United States border along the eastern edge of the Blue Water Area has sizable impacts on the regional businesses in St. Clair County, especially retail businesses that benefit from Canadian visitors coming to the region to shop or to dine.

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1. Executive Summary

Since its initial construction in 1938, the Blue Water Bridge has been an important link between the United States and Canada. In light of its proximity to the large economic and population centers of Detroit and Toronto, the border crossing in St. Clair County,[1] Michigan, is one of the busiest between Canada and the United States. The impacts of the border crossing are felt in tourism, economic development, education, and health care.[2]

Border-dependent businesses play a sizable role in the economic and social life of St. Clair County. They account for 5.8% of jobs and 8.0% of the total payroll in the county. Canadian customers and border-related businesses provide about 2.5% of other business in St. Clair County such as banking, insurance, education, and health care. Canadian visitors numbering about 700,000 annually account for about 7% of the county's leisure industry sales. In 2008, total sales of county businesses to Canadian customers and border-related business are estimated to have been at least $109.7 million.

1.1. Population and Industry Background

Population growth in St. Clair County is faster than the average in southeast Michigan.

Population increased at an annual average rate of 0.5% in St. Clair County from 2000 to 2008 compared with a 0.1% growth rate in the southeast Michigan Council of Governments (SEMCOG)[3] region. The estimated population in St. Clair in 2008 was 170,880. Based on a forecast by SEMCOG, its population is expected to grow at an annual average rate of 0.4% per year from 2000 to 2035, reaching 192,167 in 2035.

Employment in St. Clair County declined from 2000 to 2008.

Total private-sector employment in St. Clair County totaled 41,011 in 2008. Employment declined 1.0% per year from 2000 to 2008. Despite the decline in employment, St. Clair County has performed better than the SEMCOG region.

Annual wages in St. Clair County are about 70% of the SEMCOG regional average.

In 2008, the average wage in St. Clair County was $34,840 compared with $49,823 in the southeast Michigan region. St. Clair County is skewed toward low-paying manufacturing while other parts of southeast Michigan have a larger proportion of jobs in high-paying finance and professional service firms.

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[1] St. Clair County is defined as the study area for this analysis.

[2] The Blue Water Area Chamber of Commerce, in partnership with the St. Clair County Metropolitan Planning Commission, contracted Chmura Economics & Analytics (Chmura) to conduct this study on the impact of border-related activities on St. Clair County.

[3] In this study, 'southeast Michigan' and 'SEMCOG region' are used interchangeably. The SEMCOG (Southeast Michigan Council of Governments) region comprises these counties: Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne.

Manufacturing is the largest industry sector in St. Clair County as measured by employment.

The largest industry sectors in the county were manufacturing, accounting for 18.2% of employment in 2005, followed by the health care and social assistance sector. From 2005 to 2035, employment in the county is expected to grow at an annual average rate of 0.6% per year, according to a SEMCOG forecast. Health care and social assistance is expected to expand at an average 2.3% per year, followed by 1.6% annual average growth in administrative, support, and waste service.

1.2. Recent Border-Crossing Activities

In 2008, a total of 4.8 million vehicles crossed the Blue Water Bridge.

Border traffic peaked in 2000 at about 6 million vehicles but experienced a slight decline afterward, with 4.8 million crossings in 2008. Of all traffic, about 70% of the border crossing traffic are cars and 30% are trucks.

In 2009, an estimated total of 21.8 million tons of commodities will cross the Blue Water Bridge.

Approximately 6% of the commodities crossing the Blue Water Bridge in 2009 have origin or destination in St. Clair County, with a large proportion of these being farm products; primary metal products; and pulp, paper, or allied products.

The top purpose of passenger vehicles crossing Blue Water Bridge is for shopping or dining.

Based on a 2009 survey conducted by the Michigan Department of Transportation (MDOT), the largest percentage of passenger vehicle traffic on the bridge is for shopping or dining. The survey found that 55.5% of cars leaving or coming to St. Clair were traveling for this purpose. An additional 19.6% of cars leaving or entering St. Clair County via the bridge held passengers headed for work or school.

An estimated average of 1.3 million visitors came to St. Clair County annually from 2000 to 2004.

Based on Michigan State University (MSU) estimates, an annual average of 1.3 million visitors[4] came to St. Clair County from 2000 to 2004. Among these visitors, 19% visited because of business and 81% came for leisure. Visitors stayed an average of 2.1 days.

1.3. Border-Related Economic Impact

Sixty-two firms in St. Clair County are identified as border-dependent firms.

In this study, border-dependent firms are defined as Canadian-owned businesses of all types located in St. Clair County, private American-owned international border businesses, and public sector border-related agencies located in St. Clair County. Among these business, 28 firms are owned by Canadians, 30 are private U.S. firms engaging international border business such as customer brokers and freight forwarders. About 2.2% of all business establishments in the county are border-related.

[4] The visitor is defined as a person who travel more than 50 miles from his or her home.

Employment in border-dependent businesses in St. Clair County is estimated to have been 2,399 in 2008, accounting for 5.0% of total county employment.

Among these employees, 1,732 workers were employed by Canadian-owned business, 400 were employed by private international border business, and 267 were employed by public border-related businesses. The total payroll of border-related business was estimated to be $114.8 million for 2008, or $47,851 per worker.

Border-dependent businesses in St. Clair County are heavily concentrated in manufacturing (1,287), transportation and warehousing (657), and public administration (265) sectors. In 2008, 57.7% of the transportation and warehousing employment in the county worked in border-related businesses. Of all county manufacturing employment, 17.1% worked for Canadian-owned businesses in 2008; 10.7% of public sector employees worked for border-dependent businesses.

The total export value from St. Clair County is estimated at $1.1 billion in 2008.

The $1.1 billion total export value from St. Clair County was 2.44% of the total export value from the Detroit-Warren-Livonia metropolitan statistical area (MSA). It is estimated that more than 10% of St. Clair County's outputs are for export.

Business surveys indicate that border-dependent businesses play various roles in sectors from utility, finance, professional service, culture, and education.

5.8% of employment in St. Clair County worked for border-dependent businesses that accounted for 8.0% of the total payroll of the county. Canadian customers and border-related businesses provide about 2.5% of other business in St. Clair County including banking, insurance, education, and health care.

Total Canadian visitors to St. Clair County are estimated to be 696,461 in 2009 with total visitor spending amounting to $57.0 million.

Canadian visitors defined here exclude those Canadians who live or work in the county. Among such visitors, 69% typically visit the county to shop or dine and they spend an average $90.38 per person per day, more than social visitors ($35.69 per person per day) or all other visitors ($70.68). The largest portions of visitor spending are for apparel, food, and gas.

St. Clair County attracts a large number of repeat day-trippers from Canada.

According to intercept survey data, 84% of typical Canadian visits to the county are day trips. Nearly all (96%) of Canadian visitors surveyed said they visit the county at least once per year with over half visiting at least monthly. A little over half (55%) of the respondents reported living within an hour's drive of the border crossing—London accounted for 16% of respondents and Toronto for 4%.

The American-Canadian border has other positive economic impacts on the region not quantified in this report.

The border creates other positive economic benefits, the quantification of which was beyond the scope of this report. These impacts include wider labor pool access, spending from U.S. travelers heading to or from Canada, benefits from cultural exchange, and opportunities due to the border crossing such as competitive advantages in the sectors of transportation and trade.

Table 1.1: Border-Related Economic Impact Summary	Estimated Border-Related Impacts	Estimated % of County Total
Employment and Sales of Border-Related Business		
Total Employment of Border-Related Business	2,399	5.8%
Total Payroll of Border-Related Business	$114,795,393	8.0%
Machinery & Equipment Purchase by Canadian Firms	$540,000	NA
Total Export from St. Clair County	$1,144,340,438	NA
Sales to Border-Related Businesses or Canadian Customers	**$111,187,262**	**2.5%**
Utility	**$50,000,000**	3.4%
Health Care, Total	**$1,906,938**	**0.3%**
Heath Care	$1,471,712	
Pharmacy	$435,226	
Financial and Professional Service, Total	**$1,680,489**	**0.3%**
Banking	$875,530	
Financial Accounting	$30,000	
Legal	$12,500	
Insurance	$734,959	
Temporary Employment Sector	$27,500	
Culture and Education, Total	**$617,898**	**0.7%**
Media	$81,624	
Education	$536,274	
Real Estate & Marinas	**$10,095**	**0.0%**
Commercial Real Estate	$0	
Marinas	$10,095	
Canadian Visitor Spending	$56,971,842	**7.6%**
Source: Chmura Economics & Analytics		

1.4. Economic Impact of Blue Water Bridge Plaza Project

The Blue Water Bridge Plaza project to improve access to the border-crossing is expected to cost $445 million (in 2008 dollars).

The Michigan Department of Transportation is undertaking the expansion of the United States Plaza by the Blue Water Bridge to raise efficiency and accommodate increased future traffic across the bridge. While the total cost of the project is expected to be $445 million, direct construction spending is estimated to be $300 million (excluding rights-of-way and spending outside St. Clair County). From 2009 to 2016, the direct spending is estimated to generate a total economic impact of $439.6 million in the region. Construction is estimated to directly create an annual average of 291 jobs in St. Clair County from 2009 to 2016, causing a ripple effect that will result in 135 additional jobs in the region per year.

The value of travel efficiency and cost saving is assumed to be $2.8 million in 2030 and years after.

The improved Blue Water Bridge Plaza project could provide a time savings of 87% for commercial vehicles and 89% for passenger vehicles. Based on these assumptions from the MDOT traffic model and traffic volume in 2030, the annual time savings for St. Clair businesses and residents is estimated to be 4,041 hours in 2030. The value of travel efficiency and cost savings is estimated to be $2.8 million for the year 2030.

The project can support 38 businesses and 993 permanent jobs in St. Clair County.

The jobs supported by the Blue Water Bridge Plaza project include five federal and state agencies with a total of 485 jobs. Other businesses will be serving Blue Water Bridge Plaza, including hotels, gas stations, and restaurants. The annual economic impact of service businesses on St. Clair County is estimated to be $246 million in 2030. Of this, $112 million is direct spending and $134 million is derived from indirect and induced economic impacts. In terms of job creation, spending around the project corridor can potentially support 1,199 jobs in the county. Of these, 993 jobs will be at service businesses while 206 jobs will be created by ripple spending effects.

2. Background

The Blue Water Area is in southeast Michigan along the St. Clair River and Lake Huron, to the northeast of Detroit. It encompasses St. Clair County, which is part of the Detroit metropolitan statistical area (MSA)—the eleventh largest MSA in the United States in terms of population.[5] The county seat, Port Huron, is about 60 miles from Detroit. The Blue Water Area includes the communities of Port Huron, Algonac, Marine City, Marysville, Lexington, Port Sanilac, Harbor Beach, and Port Austin. The Blue Water Bridge links St. Clair County, which lies across the St. Clair River from the Canadian city of Sarnia, Ontario.

The first bridge over the St. Clair River opened in 1938.[6] The original border crossing plaza on the United States side (referred to as the Blue Water Bridge Plaza) was located at Pine Grove and 10th Avenue in Port Huron to handle border inspections. The plaza was expanded in the 1950s. During the 1980s and early 1990s, the plaza was expanded to include 13 primary inspection booths for traffic from Canada. In 1992, an international task force studying the crossing concluded that the existing bridge lacked sufficient capacity; therefore a new bridge should be built. Construction on the second Blue Water Bridge span began in 1995 and it opened to traffic in July 1997. Each span now has three lanes of traffic, with the original bridge carrying traffic from Canada to the United States and the new bridge carrying traffic from the United States to Canada.[7] In recent years, MDOT conducted a study on the feasibility of expanding and improving the border crossing.

The Blue Water Bridge is an important link between the United States and Canada. Because of the proximity of large economic and population centers in Detroit, Michigan, and Toronto, Canada, the border crossing at St. Clair County is one of the busiest between Canada and the United States. The economy and the culture in St. Clair County are influenced by the border crossing, which impacts area tourism, economic development, education, and health care.

The Blue Water Area Chamber of Commerce, in partnership with the St. Clair County Metropolitan Planning Commission, retained Chmura Economics & Analytics (Chmura) to estimate the economic impact of the border crossing, the result of which is this report. The rest of this report is organized as follows: Section 3 outlines the methodology used to analyze the economic impacts of the border crossing. Section 4 provides a demographic and economic snapshot of St. Clair County, especially those industries related to border crossings, such as tourism. Sections 5 and 6 report in detail the impact of the border crossing including the size of the border-dependent businesses and how they interact with other industries in St. Clair County. Section 7 provides an estimate of the economic impact of the proposed Blue Water Bridge Plaza expansion project. The appendices include detailed reports on the business and visitor surveys that were conducted to gather primary data for this study.

[5] Source: Census.
[6] Source: Blue Water Bridge Authority website.
[7] Source: The information in this paragraph is from Record of Decision: Proposed Expansion of the Blue Water Bridge Port of Entry Port Huron, Michigan, FHWA-MI-EIS-05-2-R, Federal Highway Administration.

3. Methodology

3.1. General Approach

This study uses survey methods to collect the necessary data supplemented by publicly available information to estimate the economic impact of the border crossing. The first step in this process is to identify border-dependent firms. In this study, border-dependent firms are:

1. Canadian-owned businesses of all types in St. Clair County. This sector does not include self-employed Canadians in St. Clair County.
2. U.S.-owned international border businesses in St. Clair County, which include: private sector customs brokers, warehouses, freight forwarders, truckers, duty-free shops, and consultants (other than lawyers and accountants).
3. Public sector border-related agencies in St. Clair County, which include: Immigration and Naturalization, U.S. Customs and Border Protection, General Services Administration, Food and Drug Administration, U.S. Department of Agriculture, Federal Bureau of Investigation, and the St. Clair County Sheriff Department's Marine Patrol.

The list of border-dependent firms was provided by the Blue Water Chamber and Consul General of Canada in Detroit (who assisted with identifying Canadian-owned businesses). Further discussion of the composition of this list is found in Section 6.10.

Chmura used 2008 as the benchmark year to gather data because data from the most recent years are more accurate than information from several years ago. Replication of this project on a biennial basis will allow the Chamber to build the historical track of data it desires.

3.2. Survey Methodology

Fourteen surveys were conducted for this project that consisted of an intercept survey of Canadian visitors to St. Clair County and surveys of thirteen business sectors. Since the type of impact varies according to the type of business, thirteen unique surveys were used among the following business groups:

1. Canadian-Owned Firms
2. Utilities
3. Health Care
4. Pharmacies
5. Banks
6. Financial Accounting
7. Legal
8. Insurance
9. Temporary Agencies
10. Media
11. Education
12. Commercial Real Estate
13. Marinas

To develop contact lists for the business sectors, the Blue Water Chamber provided Chmura with two commercially available contact lists, the primary one being a Harris List from Dun & Bradstreet.[8] Mainly following industry codes, Chmura developed proposed contact lists that were submitted to the Chamber for approval and revision. The business sectors were mutually exclusive with the exception of the Canadian-owned sector which included some overlap with the other sectors. Therefore, some Canadian-owned businesses were surveyed twice: once about their experiences as non-U.S. firms and once about their industry sector. The impacts measured were different, so the effects were not double counted.

The business surveys were conducted in the spring and summer of 2009. The questionnaires used are included in the appendix along with the complete survey report. Further details on methodology also are found in the appendix along with notes specific to each business sector. The business surveys were executed using mail, telephone, and e-mail, according to the needs of the sector. The visitor surveys were intercept surveys[9] conducted in July 2009—complete details are in the appendix.

The Blue Water Chamber provided further assistance in the survey process by using press releases to make its members aware of the survey and to encourage participation. This had a notable beneficial effect, as telephone interviewers often found that business respondents were already familiar with the survey and were therefore more likely to cooperate.

The population sizes of the business sectors have several degrees of uncertainty. First, not all businesses may have been included in the commercial list because of general incompleteness or to the timeliness of the lists. Second, some firms have multiple branches and while some such instances were identified by Chmura during the survey process, others likely were not. Third, in some cases the contact information available was a wrong address or disconnected phone number. Determining during the survey process that the firm was out of business or had different current contact information was sometimes possible, but sometimes not.

For documentation and follow-up purposes—including a possible replication of this survey in two years—a confidential addendum to this report is being provided to the Blue Water Chamber that includes contact information for each surveyed business sector. The individual responses of the businesses are not disclosed because the replies were provided confidentially. However, the list identifies which businesses participated in the survey, the name and contact information of the person providing the information, which businesses declined to participate, and those firms from which responses were not gathered for other reasons, such as failure to make contact or bad contact information.

3.3. Methodology for Economic Impact of Border-Crossing Expansion

This section addresses the methodology to evaluate the economic impacts from the proposed expansion of the border crossing, Blue Water Bridge Plaza. Generally speaking, the sources of regional economic impact attributable to a highway can be grouped into three categories:

1. Temporary construction impact
2. Increased economic efficiency

[8] Harris Infosource, a division of Dun & Bradstreet, is a private supplier of business contact databases; see www.harrisinfo.com.
[9] An intercept survey was conducted when a researcher approached individuals on the streets or other locations and asked them to complete a survey.

3. Strategic development or business attraction effects

The project has a one-time economic impact during its construction phase. After the project is completed, the regional businesses will benefit from less traffic congestion and improved traffic flow. Another direct and visible impact as a result of the expanded border crossing is roadside services. Entrepreneurs and established corporations will build gas stations, truck stops, motels, and restaurants near the border crossing to serve drivers. To estimate the potential new services as a result of increased traffic, Chmura utilized a “model-by-analogy” approach. Essentially, Chmura considers previous regression models built with roadside service data on highway investment. These models estimate the quantitative relationship between the number of new businesses and a few key factors such as average daily traffic.

After the direct new business impacts were estimated, Chmura used IMPLAN[10] to estimate the ripple economic impacts of those new businesses on St. Clair County. To estimate this impact, the cost of construction and traffic estimates before and after border crossing improvement were required. This information was provided by MDOT.

[10] IMPLAN is an economic impact assessment modeling system. It allows the user to build economic models to estimate the impacts of economic changes in states, counties, or communities. It was created in the 1970s by the Forestry Service and is widely used by economists to estimate the impact of specific events on the overall economy. It is one of the most commonly used models to estimate the economic impact of an event.

4. Regional Background

This section details the demographic and economic background of St. Clair County, providing a backdrop for the business survey and the analysis of the economic impact of the border crossing expansion project.

4.1. Population

4.1.1. Population Growth

Population growth is an important indicator of a community's health. Population gains, coupled with productivity growth, cause an economy to grow and living standards to rise. The influx of population into an area stimulates the housing market, retail business, and overall consumption, resulting in a larger tax base for the community.

In 2008, St. Clair County had 170,880 residents. From 2000 to 2008, population growth in the county eclipsed the average in southeast Michigan. Based on 2000 Census data and 2008 population estimates, population has increased at an annual average rate of 0.5% in St. Clair County, compared with a 0.1% growth rate in the SEMCOG region. However, the lower population growth of the SEMCOG region is a result of continued population loss in Wayne County, the largest county in the region which includes Detroit. Several other counties in the region, such as Livingston and Washtenaw, enjoyed faster population growth than St. Clair.

Table 4.1: Total Population and Growth in Southeast Michigan

County	2000 Census	2008 Estimate	Annual Growth Rate (2000-2008)
St. Clair	**164,235**	**170,880**	**0.5%**
Livingston	156,951	183,868	2.0%
Macomb	788,149	832,139	0.7%
Monroe	145,945	153,612	0.6%
Oakland	1,194,156	1,204,659	0.1%
Washtenaw	322,770	351,976	1.1%
Wayne	2,061,162	1,975,139	-0.5%
Southeast Michigan	4,833,368	4,872,273	0.1%

Source: SEMCOG: Population and Households in Southeast Michigan, 2000-2008

4.1.2. Population Projection

Population growth in St. Clair County and southeast Michigan is projected to follow a similar trajectory to that of the past several years. Based on a SEMCOG projection, county population will grow at an annual average rate of 0.4% per year from 2000 to 2035, reaching 192,167 in 2035. Meanwhile, the population of the southeast Michigan region is projected to grow 0.1% per year. Of all counties in the SEMCOG region, only Wayne County is projected to lose population by 2035. Several other counties in the region, such as Livingston, Macomb, and Washtenaw, are projected to outpace St. Clair in population growth.

Table 4.2: Population Projection in Southeast Michigan					
County	2000	2015	2025	2035	Annual Projected Growth Rate (2000-2035)
St. Clair	**164,235**	**176,030**	**185,038**	**192,167**	**0.4%**
Livingston	156,951	197,228	205,602	213,557	0.9%
Macomb	788,149	867,339	890,013	925,723	0.5%
Monroe	145,945	156,652	163,709	170,213	0.4%
Oakland	1,194,156	1,235,849	1,272,065	1,336,761	0.3%
Washtenaw	322,770	353,327	361,715	380,170	0.5%
Wayne	2,061,162	1,837,542	1,811,244	1,837,444	-0.3%
Southeast Michigan	4,833,368	4,823,967	4,889,386	5,056,035	0.1%

Source: SEMCOG:2035 Forecast for Southeast Michigan

4.2. Industry Background

4.2.1. Total Employment and Wages

Total private-sector employment in St. Clair County totaled 41,011 in 2008,[11] the latest available data (Figure 4.1). Employment in the county has been declining from 2000 to 2008, averaging a 1.0% decrease per year. The county suffered large losses during the 2001 recession, contracting by more than 2,000 jobs in 2001. The economy experienced modest job growth from 2004 to 2006, but the growth has turned negative since then. The recent national recession has accelerated job losses. Wage and salaried jobs declined 2.37% in 2008 in the county based on the Quarterly Census of Employment and Wages (QCEW) from the Michigan Department of Energy, Labor & Economic Growth. The prospect for 2009 is even worse.

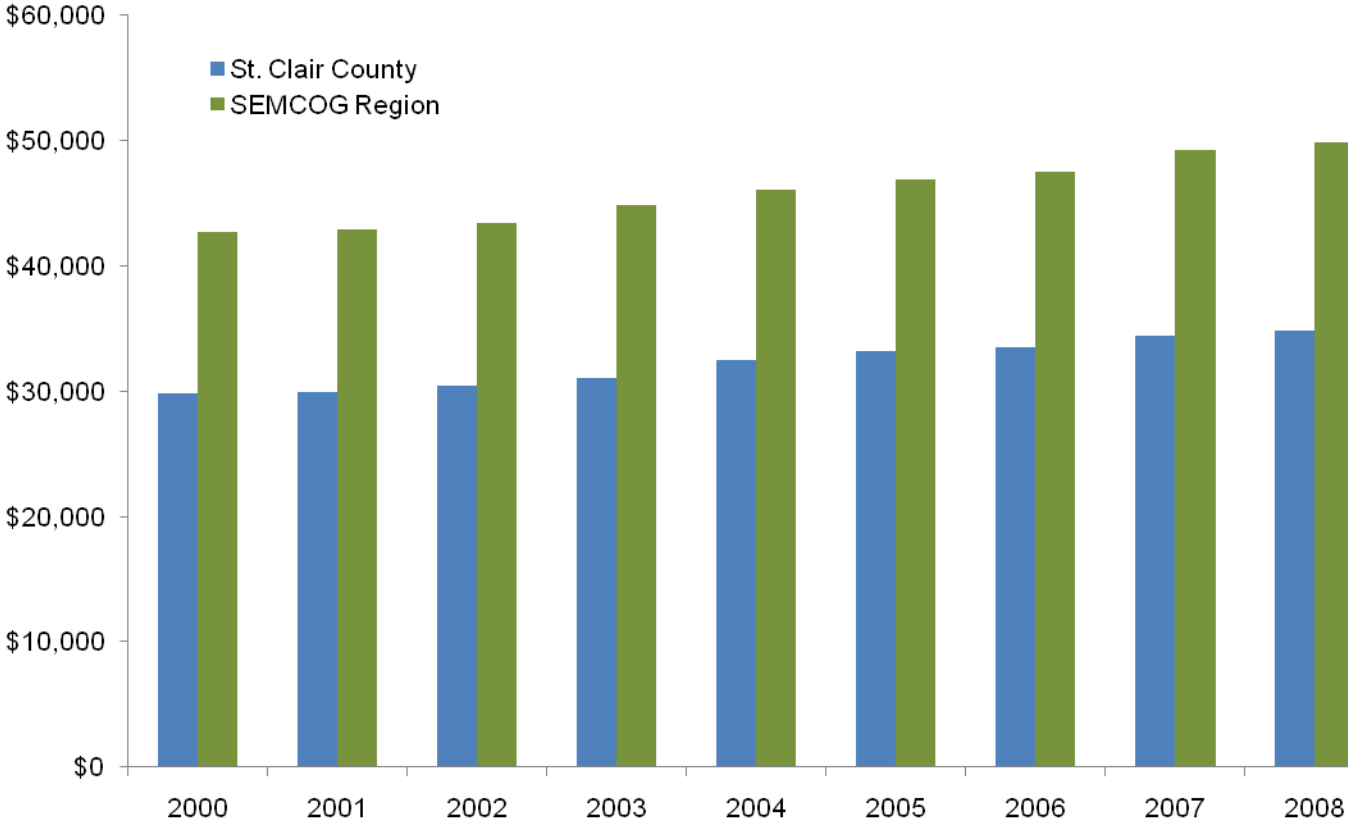
Despite the decline in 2008, St. Clair County experienced better employment performance than the southeast Michigan region. Employment has decreased at an average annual rate of 1.0% in the county since 2000 compared with 1.8% decline for southeast Michigan. St. Clair is an outlying area of a region centered around Detroit, which has borne the brunt of the recession and the failing automobile industry.

Annual average wages in St. Clair County stand well below the regional average. In 2008, the average wage in St. Clair County was $34,840 compared with $49,823 in southeast Michigan (Figure 4.2). The wage level of the county is 70% of the regional average. However, wage growth in the county has been keeping up with regional growth. From 2000 to 2008, the average wage of the county and southeast Michigan grew an average of 2.0% per year with the fastest increase in St. Clair occurring from 2004 to 2005. With the current recession and expected job losses, wage growth in the county is expected to remain modest in the near future.

[11] Source: Michigan Department of Labor, Quarterly Census of Employment and Wages (QCEW). This number includes only private wage/salary employment, as government employment was not available from 2000 to 2004. This series does not include proprietor employment. According to the U.S. Bureau of Economic Analysis, proprietor employment was 15,637 in 2007. The QCEW measurement was chosen to be consistent with the SEMCOG industry structure measurement, which is outlined in the next section.

The average wage in St. Clair County is much lower than the regional average because its industry mix is skewed toward low-paying manufacturing jobs, while other parts of southeast Michigan have more employment in high-paying finance and professional service jobs. The industry mix of the county is analyzed below.

Figure 4.2: Average Annual Wages in St. Clair County and SEMCOG Region



Source: Michigan Department of Energy, Labor & Economic Growth

4.2.2. Major Industry Sectors

Table 4.3 shows the industry structure, measured by the employment by major industry sectors in St. Clair County.[12] In 2005, total employment in the county was 47,319.[13] Despite its decline in recent years, manufacturing was still the largest industry sector in St. Clair County, accounting for 18.2% of the total employment. The second-largest industry sector is health care and social assistance, accounting for 15.2% of the total. However, the trajectories of these two major sectors have diverged. From 2002 to 2005, employment in manufacturing declined 2.0% per year, while that of health care and social assistance grew 2.3% per year. Following those two sectors in overall size are retail trade (14.5% of total employment), education services (10.9%), and leisure and hospitality (10.7%).

[12] This industry classification is based on Northern American Industry Classification System (NAICS). NAICS is used in this section because it can be easily compared with other regions.

[13] This number includes public sector employees.

Table 4.3: Industry Structure and Growth of St. Clair County	2005 Employment	% Employment	2002-2005 Growth Rate
Natural Resources & Mining	72	0.2%	-11.3%
Manufacturing	8,620	18.2%	-2.0%
Wholesale Trade	1,526	3.2%	-0.6%
Retail Trade	6,881	14.5%	-3.7%
Transportation & Warehousing	1,550	3.3%	4.6%
Utilities	NA	NA	NA
Information	1,139	2.4%	1.2%
Financial Activities	1,796	3.8%	-9.1%
Professional, Scientific, & Technical Services	1,588	3.4%	-2.5%
Management of Companies & Enterprises	NA	NA	NA
Administrative, Support, & Waste Services	1,344	2.8%	-10.2%
Education Services	5,159	10.9%	0.9%
Health Care & Social Assistance	7,211	15.2%	2.3%
Leisure & Hospitality	5,054	10.7%	2.8%
Other Services	1,364	2.9%	-5.5%
Public Administration	2,484	5.2%	1.1%
Total	47,319		-1.2%

Source: SEMCOG: Current Employment Estimate 02-05

Aside from health care and social service, the county has added jobs in the transportation and warehousing sector and leisure and hospitality sector from 2002 through 2005. The growth of those two sectors may be attributed to increased border activity. The border crossing in St. Clair County may boost employment in the transportation as well as leisure sectors.[14] On the other end of the spectrum, employment in sectors such as financial activities; administrative, support, and waste services; and retail trade all shrank from 2002 to 2005, along with the manufacturing sector.

Compared with southeast Michigan, one significant difference in industry composition is the relatively smaller presence of professional and business services in St. Clair County. For example, 9.4% of workers in southeast Michigan were employed in the professional, scientific and technical services sector compared with 3.4% for the county. Additionally, 7.2% of workers in southeast Michigan were employed in the administrative, support and waste services sector compared with 2.8% for the county. A similar story applies to the financial activity sector.

[14] Those are analyzed later in this section.

Table 4.4: Industry Structure and Growth of Southeast Michigan	2005 Employment	% Employment	2002-2005 Growth Rate
Natural Resources & Mining	3,104	0.2%	-2.0%
Manufacturing	303,360	14.7%	-5.6%
Wholesale Trade	91,049	4.4%	-2.8%
Retail Trade	230,184	11.1%	-1.8%
Transportation & Warehousing	76,319	3.7%	-1.5%
Utilities	9,196	0.4%	-0.3%
Information	41,849	2.0%	-3.6%
Financial Activities	119,218	5.8%	0.5%
Professional, Scientific, & Technical Services	193,667	9.4%	-0.5%
Management of Companies & Enterprises	52,047	2.5%	1.4%
Administrative, Support, & Waste Services	149,241	7.2%	0.6%
Education Services	180,877	8.7%	1.0%
Health Care & Social Assistance	271,962	13.2%	1.2%
Leisure & Hospitality	192,748	9.3%	1.4%
Other Services	65,468	3.2%	-1.2%
Public Administration	87,380	4.2%	1.0%
Total	2,067,669		-1.0%

Source: SEMCOG: Current Employment Estimate 02-05

4.2.3. Industry Projection

Employment is projected to grow faster in St. Clair County than in southeast Michigan. Based on a SEMCOG projection, jobs in the county will grow at an annual rate of 0.6% from 2005 to 2035, while jobs in the SEMCOG region are projected to grow 0.2% per year. By sector, health care and social assistance is expected to expand 2.3% per year in the county, followed by 1.6% annual growth in administrative, support, and waste services. Those two sectors are also projected to grow the fastest for the southeast Michigan region. While manufacturing in southeast Michigan is projected to lose employment at a rate of 1.8% per year, the sector is expected to decline 0.1% per year for St. Clair County. The county is projected to have sharper job declines in several sectors including utilities (-1.4%), wholesale trade (-1.2%), and retail (-0.4%).

Table 4.5: Employment Projection by Sector	St. Clair	Southeast Michigan
Natural Resources & Mining	-1.0%	-0.9%
Manufacturing	-0.1%	-1.8%
Wholesale Trade	-1.2%	-1.4%
Retail Trade	-0.4%	-0.8%
Transportation & Warehousing	0.5%	0.3%
Utilities	-1.4%	-1.9%
Information	-0.6%	-0.2%
Financial Activities	0.7%	0.1%
Professional, Scientific, & Technical Services	0.3%	0.5%
Management of Companies & Enterprises	-0.4%	-0.8%
Administrative, Support & Waste Services	1.6%	1.2%
Education Services	0.5%	0.4%
Health Care & Social Assistance	2.3%	1.9%
Leisure & Hospitality	0.6%	0.4%
Other Services	0.6%	0.1%
Public Administration	0.2%	-0.2%
Total	0.6%	0.2%

Source: SEMCOG 2035 Forecast-Employment by Sector

4.3. Border-Crossing Activities

Background information on border crossing activities with information collected from publicly available data sources is presented in this section.

4.3.1. Overall Traffic Volume

The Blue Water Bridge crossing attracts millions of motor vehicles each year. The traffic can be categorized as westbound (from Canada to the U.S.) and eastbound (from the U.S. to Canada). In 2008, a total of 4.8 million vehicles crossed the bridge in either direction (Figure 4.3).[15] Border traffic peaked in 2000 at a little less than 6.0 million vehicles, and then declined for the next three years. The decline accelerated after 2006 as economic conditions worsened and the economy entered the recession. Border traffic fell 3.3% in 2006, 5.4% in 2007, and 2.5% in 2008. Some of the decline can be attributed to the decline in automobile sales in the United States. From 2000 to 2008, annual national auto sales fell from 17.4 million to 13.2 million.[16]

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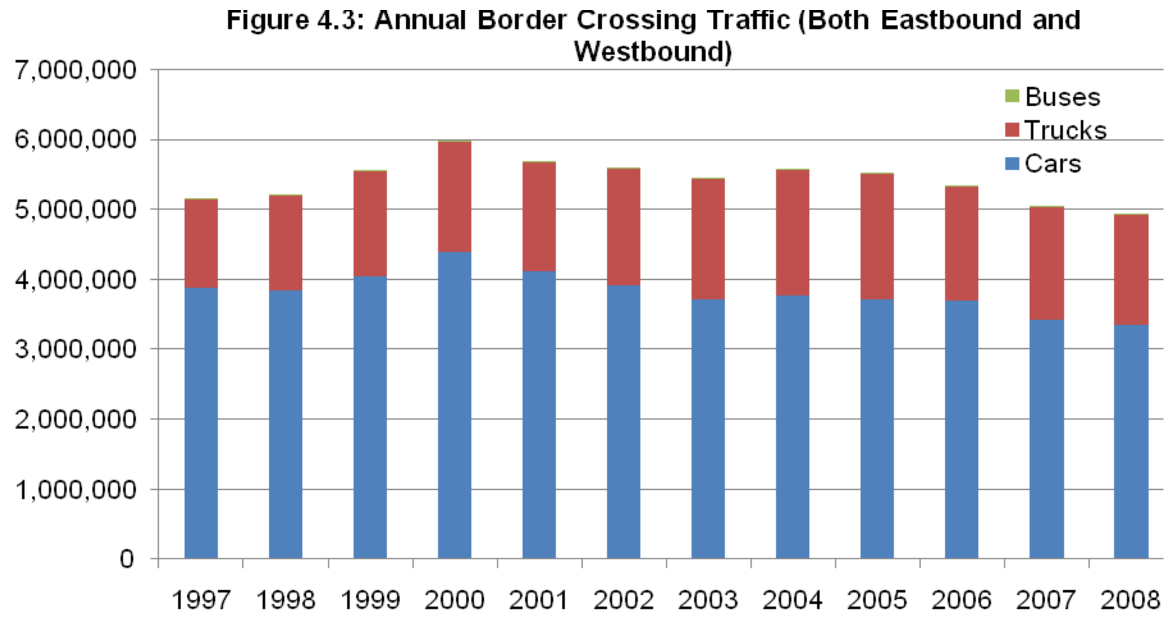
[15] In this figure, the bus traffic is too small to be visible.

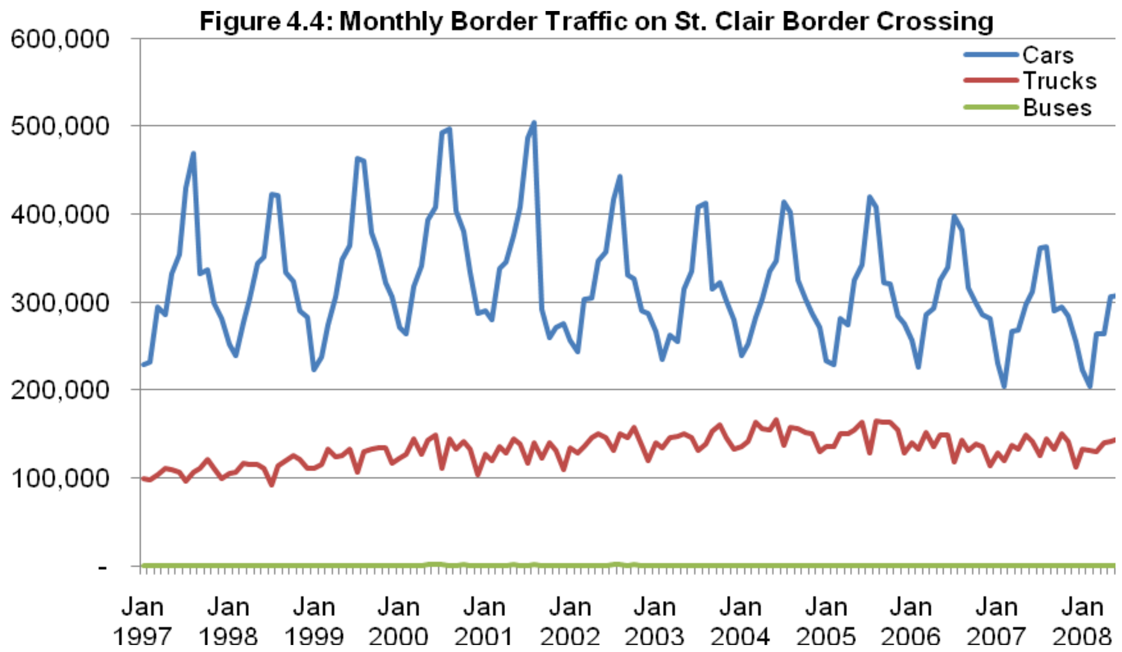
[16] Source: U.S. Department of Commerce.



Source: Blue Water Bridge Canada

Of all border-crossing traffic, an average (1997 to 2008 average) of 70% are cars and 30% are trucks. By comparison, bus traffic is negligible. The proportion of cars that make up the traffic total has slowly declined, falling from 75% in 1997 to 68% in 2008.

Strong seasonality exists for car crossings. The summer months (June, July, and August) are the most popular while winter months (December through March) experience the lowest amount of traffic for the bridge. Less seasonality is observed in truck traffic. The reason could be that a large percentage of car traffic is for personal or leisure purposes. Summer is the traditional vacation period, resulting in a large rise in traffic.



4.3.2. Commodity Movement

Table 4.6 provides more details regarding commodity movement on the Blue Water Bridge. An estimated total of 21.8 million tons of commodities will cross the Blue Water Bridge in 2009. Among those, 280 thousand tons of commodities are shipped to destinations within St. Clair County and 926 thousand tons of commodities originate in St. Clair County. The majority of the commodity shipments (20.6 million tons, or 94% of total shipments) that traversed the Blue Water Bridge have origins and destinations other than St. Clair County. These data suggest that the vast majority of truck users of the Blue Water Bridge are affiliated with businesses outside St. Clair County.

Table 4.6: Commodity Flow on Blue Water Bridge (2009 Estimated Tons)

Commodity	Crossing	Origin St. Clair	Destination St. Clair	Total
Apparel or Finished Textiles	56,633	0	0	56,633
Chemicals or Allied Products	1,744,110	0	0	1,744,110
Electrical Equipment	181,077	0	0	181,077
Fabricated Metal Products	312,335	0	13,779	326,114
Farm Products	1,193,727	538,307	132,575	1,864,609
Food Products	1,706,146	24,684	31,692	1,762,522
Furniture or Fixtures	250,098	0	0	250,098
Hazardous Material	256,257	0	0	256,257
Instruments, Photo Equip, Optical	22,764	0	0	22,764
Logs, Lumber or Wood Products	657,934	4,383	0	662,317
Machinery	434,103	10,017	0	444,120
Mail or Contract Traffic	3,391	0	0	3,391
Metallic Ores	35,214	0	0	35,214
Misc Forest Products	60,615	0	0	60,615
Miscellaneous Manufacturing Products	244,484	9,642	462	254,588
Mixed Freight Shipments	597,480	0	4,069	601,550
Nonmetallic Ores, Minerals	488,215	24,807	0	513,021
Ordnance	29,843	0	0	29,843
Petroleum or Coal Products	792,507	0	0	792,507
Plastics and Rubber	1,077,273	14,024	0	1,091,297
Primary Metal Products	2,473,997	110,182	55,621	2,639,800
Printed Matter	126,820	0	0	126,820
Pulp, Paper, or Allied Products	1,015,581	126,075	23,827	1,165,483
Shipping Containers	334,540	31,481	12,230	378,251
Stone, Clay and Glass Products	561,780	8,172	0	569,952
Textile Mill Products	10,852	0	0	10,852
Transportation Equipment	2,176,624	24,385	6,038	2,207,046
Waste or Scrap Material	3,712,588	0	0	3,712,588
Total	**20,556,986**	**926,157**	**280,294**	**21,763,437**

Source: Michigan Department of Transportation

The major commodities crossing the Blue Water Bridge are waste or scrap material (17.1% of total shipment), primary metal products (12.1%), and transportation equipment (10.1%). Other major commodities include farm products, food products, and chemical or allied products. Major commodities with St. Clair as the origin or destination include farm products; primary metal products; and pulp, paper, or allied products. Note that commodities flow into and out of St. Clair County may be more diverse than these data show, since the data in Table 4.6 are estimated based on a limited survey sample (as described in the following section).

4.3.3. MDOT Blue Water Bridge Study

In June 2009, the Michigan Department of Transportation conducted an origin and destination study on Blue Water Bridge traffic. This study surveyed 4,511 passenger and commercial vehicles on the Blue Water Bridge. Among those, 30.8% (640 out of 2,076) of the eastbound traffic originated in St. Clair County, and 31.3% (761 out of 2,435) of the westbound traffic had St. Clair County as its destination. The vast majority of the vehicles starting in or bound for St. Clair County were passenger vehicles. In the study sample, only 6.9% of the eastbound traffic and 3.5% of the westbound traffic originating or terminating in St. Clair County consisted of commercial vehicles. This percentage is smaller than the 30% of commercial traffic overall on the bridge reported in Section 4.3.1, as more truck traffic services areas outside St. Clair County and due to a large percentage of local passenger traffic.

Table 4.7 presents the purposes of passenger traffic on the Blue Water Bridge. The largest percentage of passenger traffic is for shopping/dining purposes, with 55.5% of passenger cars coming to St. Clair for this purpose. Additionally, 19.5% of cars coming to St. Clair are headed for work or school. The survey found that 6.8% of cars coming to St. Clair were for recreation purposes. These figures indicate that the Blue Water Bridge provides an important link in the daily lives of people living in St. Clair County.

Table 4.7: MDOT Blue Water Bridge Survey (Canadian License)

	St. Clair County Origin and Destination	
	% Passenger Vehicles	Average Occupants per Vehicle
Shopping/Dining	55.5%	1.8
Work/School	19.6%	1.1
Recreation	6.8%	2.0
Home	1.5%	1.5
Other	16.6%	1.5
Average Daily Traffic	2,715	1.6

Source: Michigan Department of Transportation

The average number of occupants per passenger vehicle was 1.6. The vehicles with the smallest number of occupants were those that crossed the bridge on the way to work or school, with 1.1 occupants per car. The vehicles with the largest numbers of occupants were those crossing the bridge to take people to recreation and shopping/dining locations.

4.4. Tourism

The State of Michigan has commissioned several statewide tourism studies,[17] but county-level tourism data are scarce. Michigan State University has estimated the size of the tourism industry for each county, but only 2000 through 2004 average data are available (Table 4.8). Based on MSU estimates, an average of 1.3 million people visited[18] St. Clair County each year from 2000 through 2004. Among those, 19% came for business and 81% for leisure. They stayed an average of 2.1 days. In the southeast Michigan region, the majority of tourism activities are concentrated in Wayne County where Detroit is located. Nearly a third (32%) of visitors to southeast Michigan came for business purposes.

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[17] For example, DK&S has conducted visitor profile studies for Michigan in various years, with the latest available profile from 2007.

[18] A visitor is defined as a person who traveled more than 50 miles from his or her home.

Table 4.8: Tourism Summary of Southeast Michigan (Average 2000-2004)				
County	Total Annual Visitors	Business	Leisure	Average Length of Stay
St. Clair	**1,325,972**	**19%**	**81%**	2.1
Livingston	655,042	14%	86%	1.5
Macomb	1,231,819	18%	82%	2.3
Monroe	1,151,573	10%	90%	1.7
Oakland	4,106,120	31%	69%	1.9
Washtenaw	2,218,343	34%	66%	1.8
Wayne	14,480,375	38%	62%	2.2
Southeast Michigan	25,169,244	32%	68%	2.1
Source: Michigan Tourism Facts, Michigan State University Extension				

Though historic county-level visitor data are not available, statewide tourism development can indicate the trend in the tourism industry. From 2000 through 2007, tourism in Michigan experienced healthy growth. Total visitor volume to the state increased from 81.2 million in 2000 to 103.9 million in 2007,[19] an average growth rate of 3.6% per year. However, the recession may affect tourism in 2008 and 2009 and the industry may not be able to maintain this growth performance. For example, in 2008, the travel volume to Michigan declined 6.2%, and in 2009 it is projected to fall an additional 3% to 4%, with travel spending declining by the same percentage.[20]

In 2007, visitors to Michigan spent an average of $93 per person per day. Among categories of tourist spending in Michigan, the largest component is transportation, accounting for 27% of total tourism sales, followed by 24% for food, 18% for shopping, and 10% for lodging.[21]

According to another study,[22] an estimated 15.1 million Canadian visitors came to Michigan in 2003. More than three-quarters (77%) of them were day trippers while the remaining 23% stayed overnight. Canadian visitors spent an average of $18.56 per person per day in Michigan. This number is relatively small because the majority of Canadian visitors were day trippers with no expenses for lodging, plus the sample included daily work commuters as well as people simply passing through the state (and not staying overnight in the state).

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[19] Source: 2007 Michigan Visitor Profile, prepared by DK&S.

[20] Source: 2009 Michigan Tourism, Past Performance and Future Expectations, by Sarah Nicholls and Donald Holecek, Department of Community, Agriculture, Recreation and Resource Studies, Michigan State University. There is no projection for St. Clair County tourism.

[21] Source: 2007 Michigan Visitor Profile, prepared by DK&S.

[22] Source: Canadian Travel to Michigan, the 2003 Travel Year, prepared by Longwoods International.

5. Border-Dependent Firms in St. Clair County

5.1. Identifying Border-Dependent Firms

To understand the impact of the border crossing, the first step is to identify the size of businesses relying on the border crossing for their operations. In this study, border-dependent firms are defined as follows:

1. Canadian-owned businesses of all types in St. Clair County. This sector does not include self-employed Canadians in St. Clair County.
2. U.S.-owned international border businesses in the county, which include: private sector customs brokers, warehouses, freight forwarders, truckers, duty-free shops, and consultants (other than lawyers and accountants).
3. Public sector border-related agencies in St. Clair, which include: Immigration and Naturalization, U.S. Customs and Border Protection, General Services Administration, U.S. Department of Agriculture, and the county Sheriff Department's Marine Patrol.

The list of border-dependent firms was provided by the Blue Water Chamber. Further assistance in identifying Canadian-owned firms in the county was provided by the Canadian Consulate General in Detroit. All together, 62 firms are identified as border-dependent (Table 5.1). Among these, 28 are owned by Canadians. Thirty are private U.S. firms engaging in international border business such as customer brokers and freight forwarders. Four firms are public sector border businesses. Several firms have multiple branches. As a result, there were 71 border-dependent business establishments in 2009. In 2008, the total number of business establishments in St. Clair County was 3,207.[23] Therefore, about 2.2% of all business establishments in the county are border-related. A complete list of border-dependent firms appears in Appendix 15.

Table 5.1: Border-Dependent Businesses in St. Clair County

	Number of Firms	Number of Establishments
Canadian-Owned Business	28	31
U.S.-Owned Border Business	30	32
Public Sector Border Business	4	8
Total	62	71

Source: Blue Water Chamber and Canadian Consulate General in Detroit

5.2. Employment and Payroll of Border-Dependent Businesses

To estimate the employment and payroll of all border-dependent businesses, Chmura first used the Harris List provided by the Blue Water Chamber. The Harris list provides employment information for some of the border-dependent businesses; of the 71 business establishments, 51 have an employment number associated with them on the Harris List. For the rest, Chmura used the 2008 average business size at the 3-digit NAICS level for St. Clair County to estimate their employment. Harris list does not provide payroll information. As a result, average wages of

[23] Source: Quarterly Census of Employment and Wages, Michigan Department of Energy, Labor & Economic Growth.

St. Clair County in 2008 at the 3-digit NAICS level are used to estimate the payroll for border-dependent businesses.[24]

Total employment in border-dependent businesses in St. Clair County was estimated at 2,399 in 2008, accounting for 5.0% of total county employment (Table 5.2 and Table 5.3). Among those, 1,732 workers were employed by Canadian-owned businesses, 400 were employed by private international border businesses, and 267 were employed by public sector border-related agencies. The total payroll of border-dependent businesses was estimated at $114.8 billion for 2008, or $47,851 in average annual wages per worker. The average wage in border-dependent businesses was 37% higher than the county average of $34,840 in 2008. The average wage for Canadian-owned border businesses was $52,528 in 2008, the highest among the three categories of border-dependent businesses.

Table 5.2: Industry Mix of Border-Dependent Businesses in St. Clair County (2008)

	Employment	Total Payroll (Estimated)	Average Annual Wages (Estimated)
Canadian-Owned Business	1,732	$90,978,890	$52,528
Private International Border Business	400	$13,290,445	$33,226
Public Border-Related Agencies	267	$10,526,058	$39,423
Total	2,399	$114,795,393	$47,851

Source: Chmura Economics & Analytics

The reasons for high wages in border-dependent businesses lie in the industry mix of these businesses. As Table 5.3 shows, border-dependent businesses are heavily concentrated in the manufacturing (1,287), transportation and warehousing (657), and public administration (265) sectors. No border-dependent businesses exist in traditionally low-wage industries such as retail, food services, and personal services. Therefore, it is not surprising that border-dependent businesses have higher average wages than the county average.

Table 5.3: Employment by Industry of Border-Dependent Business in St. Clair County (2008)

	Canadian-Owned Business	Private International Border Business	Public Border-Related Agencies	Total	% of County Employment
Administrative, Support, & Waste Services	7	1	0	8	0.3%
Financial Activities	12	23	0	35	2.3%
Leisure & Hospitality	4	0	0	4	0.1%
Manufacturing	1,287	0	0	1,287	17.1%
Other Services	7	0	0	7	0.5%
Professional, Scientific, & Technical Srvs.	41	51	0	92	8.5%
Public Administration	0	0	265	265	10.7%
Retail Trade	11	2	0	13	0.2%
Transportation & Warehousing	336	319	2	657	57.7%
Wholesale Trade	27	4	0	31	2.6%
Grand Total	1,732	400	267	2,399	5.8%

Source: Chmura Economics & Analytics

[24] The original method states that the lists of border-related businesses (broken down by the three sub-categories) would be sent to the Michigan Department of Energy, Labor & Economic Growth to obtain aggregate employment and payroll for 2008. In the end, the department was unable to provide such data, and Chmura had to estimate the employment and payroll. Three-digit NAICS code level employment and wages are the most detailed information the department provided at the county level. In the case where employment and wages for St. Clair County are not disclosable, state-level establishment figures are used.

While border-dependent businesses account for 5.8% of the total employment in St. Clair County, they are much more important in certain industry sectors. For example, 57.7% of the transportation and warehousing workers in the county were employed in border-related businesses. Also, 17.1% of all county manufacturing employees worked for Canadian-owned businesses and 10.7% of public sector employees worked for border-dependent businesses in 2008.

For subsequent replications of these indicators, the list of border-dependent businesses used in this study should first be updated. Further, firm employment and wage data should be updated from the Michigan Department of Energy, Labor, and Economic Growth.

6. Impact of Border Crossing on St. Clair Industry Sectors

6.1. Machinery and Equipment Purchases by Canadian-Owned Business

Canadian-owned businesses were surveyed directly to obtain data on machinery and equipment purchases by Canadian-owned businesses. Respondents were asked for two items: (1) an estimate of the value of machinery and equipment their firm purchased from suppliers in St. Clair County during the 2008 calendar year and (2) contact information verification for potential follow-up. This brief survey was conducted by telephone.

Of a population of 27 businesses, 12 replies were gathered. The Canadian-owned firms in the sample indicated that they spent between $270,000 and $275,100 on machinery and equipment in 2008 from county suppliers. Assuming that the sample represented all Canadian-owned businesses in St. Clair, the total machinery and equipment purchases in 2008 by Canadian-owned businesses is estimated to be between $540,000 and $600,218. In 2008, the estimated total outputs (or sales) of Canadian-owned businesses are $461.5 million. Compared with the sales figure, the value of the machinery and equipment purchased by Canadian-owned businesses in St. Clair County is very small.

6.2. Export Sales from St. Clair County

Export sales were estimated through comparison of the St. Clair County industry mix (based upon employment data) and the most recent U.S. Department of Commerce export data for the Detroit-Warren-Livonia Metropolitan Statistical Area (MSA).[25] The metropolitan area exports by 3-digit NAICS industries are the most detailed export data available.

According to the Commerce Department, the total export value for the Detroit-Warren-Livonia MSA was $49.2 billion in 2007, 13.6% higher than the 2006 value of $43.3 billion. For 2008, only the first half of the year's export value is available, measured at $23.1 billion. This represents a 4.6% decline from the first half of 2007.

Chmura compared employment in St. Clair County with that of the Detroit-Warren-Livonia MSA at the 3-digit NAICS level and estimated the county export values by industry accordingly. For example, the employment in paper manufacturing (NAICS 322) in St. Clair County is about 22.9% of the total paper manufacturing employment in the MSA. As a result, 22.9% of the MSA export value was allocated to St. Clair County, meaning $42.7 million for 2008.

Overall, the resulting total export value from St. Clair County is estimated at $1.1 billion in 2008, or 2.44% of the total export value from the Detroit-Warren-Livonia MSA. In 2007, the total output of St. Clair County is estimated to have been $9.4 billion.[26] Therefore, more than 10% of the county's outputs are for exports.

Table 6.1: Estimated Exports from St. Clair County 2008		
	Export Value	% St. Clair Employment in Detroit-

[25] The definition of Detroit –Warren-Livonia metropolitan statistical area is different from the SEMCOG region used in this study. The MSA includes Lapper, Livingston, Macomb, Oakland, St Clair, and Wayne counties.
[26] Source: IMPLAN Pro 2007.

		Warren-Livonia MSA
Animal Production	$958,023	14.10%
Fishing, Hunting, and Trapping	$1,312,147	30.19%
Oil and Gas Extraction	$24,614,254	3.24%
Mining (Except Oil and Gas)	$57,387	0.49%
Beverages and Tobacco Products	$476,523	3.48%
Textiles and Fabrics	$14,461,732	6.25%
Textile Product Mills	$6,807,205	8.05%
Apparel and Accessories	$259,756	1.09%
Leather and Allied Products	$8,924,511	3.24%
Wood Products	$275,246	1.54%
Paper	$42,714,734	22.90%
Printed Matter and Related Products	$1,080,720	1.73%
Petroleum and Coal Products	$15,954,318	7.09%
Chemicals	$49,751,348	5.95%
Plastics and Rubber Products	$138,450,337	12.98%
Nonmetallic Mineral Products	$3,817,171	1.55%
Primary Metal Manufacturing	$62,057,793	5.43%
Fabricated Metal Products	$57,343,269	3.54%
Machinery, Except Electrical	$137,410,500	3.48%
Computer and Electronic Products	$12,194,491	0.54%
Electrical Equipment, Appliances, and Components	$40,956,289	2.00%
Transportation Equipment	$519,679,424	1.66%
Furniture and Fixtures	$1,490,209	4.15%
Miscellaneous Manufactured Commodities	$3,269,763	0.84%
Publishing Industries	$23,291	0.92%
Total Export	$1,144,340,438	3.24%
Source: Chmura Economics & Analytics		

The dominant exports are manufacturing products, accounting for 97.6% of the estimated total in 2008. Among manufacturing industries, the largest exports are in transportation equipment (estimated at $519.7 million), plastic and rubber products (estimated at $138.5 million), and machinery, except electrical (estimated at $137.4 million).

6.3. Utilities

Utility companies in St. Clair County were surveyed about the volume and value of natural gas and electrical energy purchased from Canada for use in St. Clair or purchased in St. Clair for use in Canada.

Five responses were obtained from a population of 11 firms in St. Clair County for a 45% response rate. One of the firms replied that it purchased tens of millions of dollars of natural gas from Canada for use in St. Clair. All other replies to the questionnaire were “zero.” According to estimates of the business sales volume in the Harris List provided by the Blue Water Chamber, the five respondent firms accounted for more than 70% of the sales volume in this sector. Using this percentage across all firms, the total utility purchases from Canada is estimated at $50 million in 2008.[27]

6.4. Health Care Sector

6.4.1. Health Care Providers

Health care providers include hospitals, nursing homes, and practices of doctors and dentists. A mail survey was conducted to estimate the number of patients and revenue from Canadian clients. Follow-up telephone calls were placed to the largest organizations (based on employment) that did not respond by mail.

A total of 423 organizations were identified in the health care sector in St. Clair County. After mailing out the surveys, 34 were returned as undeliverable. Of the remaining 389 organizations, 69 replied for an 18% response rate. Six of the ten largest employers participated in the survey. Based on employment and sales estimates from the Harris List provided by the Blue Water Chamber, the respondent sample represented 41% of the health care business population in terms of both sales and employment.

The surveyed health care providers reported serving 1,043 Canadian patients in 2008. Nearly three-quarters (73%) of these patients were served by just two of the organizations. Overall, 41% of the health care respondents stated that they served one or more Canadian patients in 2008. Assuming respondents represent the health care providers of St. Clair County, the total number of Canadian patients served in the county is estimated to be 2,544 in 2008.

Table 6.2: Health Care Impacts from Canadians

	Survey Response	Estimated St. Clair County Total
Number of Canadian Patients	1,043	2,544
Revenues from Canadian Patients	$603,402	$1,471,712
Value of Ancillary Services	$26,300	$64,146

Source: Chmura Economics & Analytics

Revenues from Canadian patients in 2008 totaled $603,402 among the respondents in the sample. Assuming respondents represent the health care providers of St. Clair County, total revenue from Canadian patients in 2008 is estimated to be $1.47 million.

Among the survey respondents, the value of ancillary services (such as hotel, restaurant, and transportation) used by Canadian patients while in St. Clair County in 2008 was estimated to be $26,300. Assuming respondents represent the health care providers in the county, the total value of ancillary services used by Canadian patients in 2008 is estimated to be $64,146.

In addition to these impacts due to Canadian patients, one respondent reported making a capital expenditure of $200 in 2008 expressly to attract Canadian customers.

[27] Since only one firm reported utility purchases from Canada, this study reports a range of estimated sales.

6.4.2. Pharmacy

The pharmacy sector survey was first sent to potential respondents through the mail. To further boost the response rate, follow-up phone calls were placed to each business in the sector that had not responded. Out of a population of 20, 11 replies were received for a 55% participation rate. Based on employment and sales estimates from the Harris List, the respondent sample represented 46% the pharmacy sector in terms of sales.

Of the respondent pharmacies, 73% reported serving Canadian customers in 2008. The number of customers served per respondent varied from a couple to 1,000. In addition, several respondents could only estimate the percentages, with two saying 2% to 3% of their customers were Canadians and two others estimating 10% of their customers were Canadians. At a minimum, survey respondents reported serving 1,205 Canadian customers in 2008. Assuming respondents represent the pharmacy sector in St. Clair County, the total number of Canadian customers served in the county is estimated to be 2,618 in 2008.

Table 6.3: Pharmacy Impacts from Canadians

	Survey Response	Estimated St. Clair County Total
Number of Canadian Customers	1,205	2,618
Sales to Canadian Customers	$200,302	$435,226

Source: Chmura Economics & Analytics

In all, the respondent sample reported an estimated $200,302 in pharmacy sales to Canadian customers in 2008. Assuming respondents represent the pharmacy sector in St. Clair County, total pharmacy sales to Canadian customers in 2008 are estimated to be $435,226.

6.5. Financial and Professional Services

The financial and professional service sector includes banking institutions, accountants and financial services, lawyers, insurance companies, and temporary employment services. The economic impact of border-dependent businesses and agencies was assessed through the value of services purchased by these businesses from financial and professional service providers in St. Clair County.

6.5.1. Banking

Banks were surveyed to estimate the impact of border-dependent businesses to the banking industry in St. Clair County. Of the thirteen banks surveyed, nine participated in the survey for a 69% participation rate.

The initial survey questions sought information about aggregate account balances in 2008 in term and demand accounts for Canadian individuals, Canadian businesses not in St. Clair County, and for the three groups of border-dependent organizations. However, bank respondents said these questions were too sensitive and that the information could not be released. Therefore, the questions were modified and banks were asked to report only what percentage of their customers were individual Canadians or Canadian-owned businesses.

Four of the nine banking respondents reported having Canadian personal banking customers. Two of these reported that less than 1% of all their personal banking customers were Canadians while the other two put the figure at less than 5%. On average, 0.67% of their personal banking customers are estimated to be Canadians.

Seven of the nine banking respondents said they had no Canadian-owned firms as business customers. One reported that less than 1% of its business customers were Canadian-owned and the other reported the figure at less than 5%. On average, 0.33% of respondents' business customers are estimated to be Canadian-owned. Combining personal and business customers, a conservative assumption is that 0.5% of all banking customers in St. Clair County are Canadian. In 2007, the banking industry in St. Clair County had total revenue of $175.1 million. As a result, it is estimated that Canadian customers contributed approximately $0.88 million in revenue to the St. Clair County banking industry.

Table 6.4: Canadian as Percentage of Banking Customers	
Personal Banking Customer	0.67%
Business Customer	0.33%
Source: Chmura Economics & Analytics	

6.5.2. Financial Accounting

Chmura surveyed accounting firms in St. Clair County regarding their transactions with border-related businesses. Six responses were gathered in this sector out of a population of eleven businesses for a 55% response rate. According to estimates of the business sales volume in the Harris List provided by the Blue Water Chamber, the six respondent firms accounted for at least three-quarters of the sales volume in this sector.

Among the respondent group of financial accounting firms in St. Clair County, none provided services in 2008 to public border-related agencies or to international border businesses. However, more than $10,000 of services were provided to Canadian-owned businesses in St. Clair County and more than $15,000 in services were provided to Canadian-owned businesses outside the county. Assuming that respondents represent the financial accounting sector in St. Clair County, it is estimated that the total value of accounting services to border-dependent businesses was more than $30,000 in 2008.

Table 6.5: Impact of Border-Dependent Businesses in Accounting	Value of Services Provided in 2008
Public Border-Related Agencies	$0
International Border Businesses	$0
Canadian-Owned Businesses in St. Clair County	More than $10,000
Canadian-Owned Businesses NOT in St. Clair County	More than $15,000
Source: Chmura Economics & Analytics	

6.5.3. Legal

The legal sector survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, follow-up phone calls were placed to each business that had not responded. Eleven responses were received from a population of 64 law firms. According to the sales volume estimated in the Harris List, the respondents accounted for about 20% of sales volume from this sector.

Among the sample of legal firm respondents, legal services of at least $2,500 were provided to public border-related agencies in 2008. This figure is presented as a range because of the small number of businesses reporting non-zero responses to this question. Survey respondents reported no legal services provided to international border businesses or to Canadian-owned businesses in St. Clair County. Assuming respondents represent the legal sector in St. Clair County, it is estimated that the value of legal services to all border-dependent businesses was more than $12,500 in 2008.

Table 6.6: Impact of Border Dependent Businesses in Legal	Value of Legal Services Provided in St. Clair in 2008
Public Border-Related Agencies	More than $2,500
International Border Businesses	$0
Canadian-Owned Businesses in St. Clair County	$0
Canadian-Owned Businesses NOT in St. Clair County	$6,000
Source: Chmura Economics & Analytics	

6.5.4. Insurance

Insurance firms were surveyed to estimate premiums sold in the county to Canadian individuals, Canadian-owned businesses in and outside of St. Clair County, international border businesses, and public border-related agencies. These firms were surveyed regarding insurance premiums paid by Canadian individuals for non-commercial real estate in St. Clair County. The insurance sector survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, follow-up phone calls were placed to each business that had not responded.

A total of 26 completed responses were received from a population of 95 valid business contacts. The sample of respondent businesses included the two largest insurers in the sector by estimated number of employees in the Harris List.

Survey respondents reported that insurance premiums valued at close to $300,000 were sold in St. Clair County in 2008 to individuals or businesses affected by the border crossing. Among those premiums, more than two-thirds of the value was sold to Canadian individuals. The survey found no premiums of value sold to public border-related agencies in 2008. International border businesses, such as importers and transportation firms whose activities depend heavily on the border crossing, purchased at least $7,500 in insurance premiums in 2008. More than $15,000 in insurance premiums was bought by Canadian-owned businesses in St. Clair County in 2008 while Canadian-owned businesses outside St. Clair County bought more than $40,000 worth of insurance premiums.

Table 6.7: Impact of Border-Dependent Businesses on Insurance	Value of Insurance Premiums Sold in St. Clair in 2008
Canadian Individuals	More than $ 200,000
Public Border-Related Agencies	$ 0
International Border Businesses	More than $ 7,500
Canadian-Owned Businesses in St. Clair County	More than $ 15,000
Canadian-Owned Businesses NOT in St. Clair County	More than $ 40,000
Source: Chmura Economics & Analytics	

According to estimates of the business sales volume in the Harris List, the respondent firms accounted for 42% of sales volume in this sector. Assuming respondents represent the insurance sector in St. Clair County, it is estimated that the total insurance premiums with border-dependent businesses tallied about $735,000 in 2008.

6.5.5. Temporary Employment Service

Temporary employment agencies were surveyed regarding the value of services provided to border-dependent businesses and other Canadian businesses. Two of the three firms participated in the survey. Because of the small number of firms in this sector, this survey was conducted by initiating contact with potential respondents by telephone and then sending and receiving the survey back through e-mail.

Table 6.8: Impact of Border-Dependent Businesses in Temporary Employment Service	
	Value of Temporary Help Services Provided to the Following Groups in 2008
Public Border-Related Agencies	$0
International Border Businesses	$0
Canadian-Owned Businesses in St. Clair County	$15,000 - $20,000
Canadian-Owned Businesses NOT in St. Clair County	$0
Source: Chmura Economics & Analytics	

Temporary help firms reported providing services valued between $15,000 and $20,000 in 2008 to Canadian-owned businesses in St. Clair County. No temporary help services were reported as being provided to public border-related agencies, international border businesses, or Canadian-owned businesses not located in St. Clair County. Assuming respondents represent their sector in St. Clair County, it is estimated that the value of total temporary help services to border-dependent business was between $25,000 and $30,000 in 2008.

6.6. Culture and Education

6.6.1. Media

Television, radio, and magazine media in St. Clair were surveyed regarding advertising and sponsorship receipts from Canadian-owned businesses in and outside of St. Clair County, international border businesses, and public border-related agencies. Of nine firms in the sample, four responses were received for a 44% response rate. According to the sales volume estimated in the Harris List, the respondents accounted for about 97% of the sales volume of the nine firms.

The media sector reported receiving no advertising or sponsorship dollars in 2008 from either public border-related agencies or international border businesses. Canadian-owned businesses in St. Clair County spent more than $1,000[28] in media advertising and sponsorships in 2008. In addition, Canadian-owned businesses not located in St. Clair spent $78,175 in advertising and sponsorships. Assuming respondents are a good representation of the media sector in the county, it is estimated that the total advertising receipts with border-dependent businesses were $81,624 in 2008.

Table 6.9: Impact of Border Dependent Businesses in Media Industry	
	Advertising Receipts and Sponsorship Received in 2008
Public Border-Related Agencies	$0
International Border Businesses	$0
Canadian-Owned Businesses in St. Clair County	$1,000+
Canadian-Owned Businesses NOT in St. Clair County or Canadian Individuals	$78,175
Source: Chmura Economics & Analytics	

[28] A range is given due to the small number of non-zero responses in this category.

6.6.2. Education

For the education sector, the number of Canadian students and the value of tuition were estimated for post-secondary institutions. The two primary post-secondary education institutions in the county were contacted via telephone for this survey and both responded.

Table 6.10: Canadian Students in Post-Secondary Education

	2008-09 Academic Year[29]	2006-07 Academic Year
Total Number of Students	10,735	10,073
Total Number of Canadian Students	75	72
Tuition Paid by Canadian Students	$ 536,274	$ 391,778

Source: Chmura Economics & Analytics

The number of Canadian students accounted for less than 1% of all post-secondary students during the two academic years for which data were collected. The post-secondary schools in St. Clair County had 10,735 students in the 2008-09 academic year. Of these, approximately 75 (about 0.7%) were Canadian. This was about the same ratio as recorded two years earlier. In the 2006-07 academic year, total enrollment was 10,073 with approximately 72 (0.7%) being Canadian.

Tuition paid by Canadian students was estimated at $536,274 in the 2008-09 academic year, 37% higher than the $391,778 in the 2006-07 academic year. The average tuition per Canadian student was $7,150 per year in the 2008-09 academic year, compared with $5,441 per year in the 2006-07 academic year.

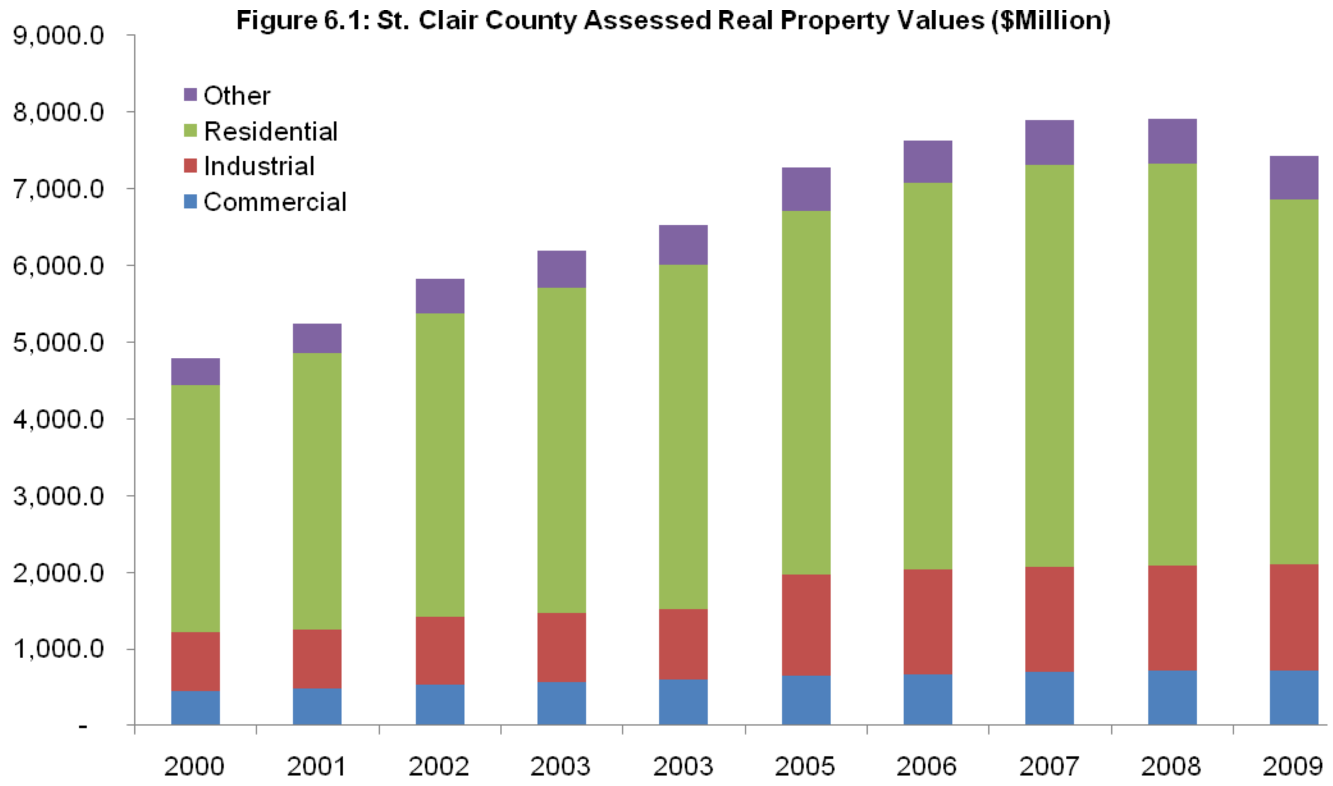
6.7. Real Estate and Marinas

This section estimates the impact of border-related business on the real estate sector and marinas in St. Clair County. It first estimates the assessed property and property tax contribution of border-dependent businesses. This is estimated based on overall assessed value in the county. It then considers survey results on real estate transactions (rental and purchase) conducted by border-dependent businesses and marina survey results based on Canadian customer sales.

6.7.1. Real Property Values by Border-Dependent Businesses

In 2009, the total assessed value of real property in St. Clair County is $7.4 billion dollars (Figure 6.1). Of that total, $4.7 billion is the assessed value for residential property, $1.4 billion is the assessed value for industrial property, and $711.3 million is the assessed value for commercial properties. Other property includes agricultural and development properties. As a result of the recession, the 2009 assessed real property value is smaller than in the previous three years.

[29] This would typically be from summer 2008 through spring 2009.



Source: Michigan Department of Treasury

Chmura used the following methodology to estimate the real property value by border-dependent businesses. Since the information regarding the ownership of Canadian-owned residential property was not available, this estimate focuses only on industrial and commercial properties.[30] For industrial property, since 17.1% of all employment in St. Clair County is manufacturing work in border-dependent businesses, Chmura allocated 17.1% of all industry property to border-dependent businesses. Similarly, 2.8% of all commercial property is allocated to border-dependent businesses.

Table 6.11: Estimated Property Value by Border-Dependent Businesses ($ Million 2009)

	Canadian-Owned Business	Private International Border Business	Public Sector Border-Related Agencies	Total
Industrial	$237.70	$0.00	$0.00	$237.70
Commercial	$7.80	$7.00	$4.70	$19.60
Total Property Value	$245.50	$7.00	$4.70	$257.20
Estimated Property Tax	$1.40	$0.00	$0.00	$1.40

Source: Michigan Department of Treasury and Chmura Economics & Analytics

[30] Since no border-related business is in the agricultural sector, it is assumed that border-dependent businesses do not own agricultural properties.

Table 6.11: Estimated Property Value by Border-Dependent Businesses ($ Million 2009)				
	Canadian-Owned Business	Private International Border Business	Public Sector Border-Related Agencies	Total
Industrial	$237.70	$0.00	$0.00	$237.70
Commercial	$7.80	$7.00	$4.70	$19.60
Total Property Value	$245.50	$7.00	$4.70	$257.20
Estimated Property Tax	$1.40	$0.00	$0.00	$1.40

Source: Michigan Department of Treasury and Chmura Economics & Analytics

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Total Property Value	$245.50	$7.00	$4.70	$257.20
Estimated Property Tax	$1.40	$0.00	$0.00	$1.40

Source: Michigan Department of Treasury and Chmura Economics & Analytics

The total value of industrial and commercial property attributed to border-dependent businesses is estimated to be $257.2 million. The majority ($245.5 million) belongs to Canadian-owned businesses because of their large presence in the county's manufacturing sector. Border-dependent businesses contribute an estimated $1.4 million in property taxes to St. Clair County government as of 2009.[31]

6.7.2. Commercial Real Estate Transactions

The commercial real estate survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, multiple follow-up phone calls were placed to each business in the sector that had not responded.

Five commercial landlords responded to the survey. Four of the landlords stated they did not rent any office or manufacturing property to Canadians or Canadian businesses in 2008. The other respondent stated that the information could not be determined.

Since the sample reported zero rental sales to border dependent businesses, Chmura was not able to estimate the value of total commercial real estate sales to border-dependent businesses in St. Clair County.

6.7.3. Marinas

The marina survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, multiple follow-up phone calls were placed to each business in the sector that had not responded.

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[31] St. Clair County charged 0.07% property tax on taxable assessed valuation. Based on the 2007 St. Clair County Annual Report on Taxes, 76.4% of the total valuation is taxable. In St. Clair County, various townships, cities, villages, and school districts also collect property taxes with different rates. Those property taxes are not included in this estimate, as the focus here is St. Clair County government.

Of the 16 firms, eight responses were collected for a 50% response rate. According to the sales volume estimated in the "Harris List," the respondents accounted for about 62% of the sales volume of the 16 firms.

Table 6.12: Impact of Canadian Customers in Marina Sector		
Annual Gross Sales to Canadian Customers	2007	2008
Range	$1,150 to $8,250+	$690 to $7,790+
Mid-Point Estimate	$4,700	$4,240
Source: Chmura Economics & Analytics		

The marinas surveyed reported sales to Canadian individuals or businesses in 2007 and 2008. It is estimated that approximately $4,700 in marina sales in 2007 were made to Canadian customers with the figure about $4,240 in 2008 (Table 6.12). Assuming respondents are good representation of the marina businesses in St. Clair County, it is estimated that the total of such sales was $10,095 in 2008.

In 2007, no slips were reported as being leased to Canadian customers. However, in 2008, more than 40 slips were leased to Canadians over the course of more than 20 nights. The exact numbers are not released here since only one respondent reported non-zero results for slip leasing to Canadians.[32]

6.8. Canadian Visitor Spending

Based on the information in the Blue Water Bridge Intercept Survey conducted by the Michigan Department of Transportation in June 2009, the annual number of Canadian visitors (excluding those coming for the purpose of work or home)[33] is estimated to be 696,461 in 2009.[34] Among Canadian visitors, 69% come to St. Clair County for shopping and dining and the rest come to St. Clair County for entertainment, recreation, or other purposes.

To obtain a reasonable estimate of Canadian visitor spending in St. Clair County, Chmura conducted a visitor intercept survey in July 2009.[35] The survey captured the following data: approximate spending per trip; categories of spending; usual form of payment; number of trips per year; usual length of stay; place of residence; estimated drive time; total annual spending; and resulting annual sales tax from spending by Canadian visitors.

The Chmura intercept survey found that a large majority of visitors (84%) reported that their typical visits to St. Clair County are day trips. Of the 31 respondents reporting typically spending longer than one day, 14 reported usually

[32] One other respondent, however, reported that they had no way of calculating this data.

[33] In this study, Canadian visitors are defined as Canadian residents with a destination in St. Clair County, excluding those who come for work or home. While those who work in St. Clair County will spend money there, it is assumed that the jobs held by these workers will be filled even if the border were shut down, in which case the workers would be likely from the United States. These workers would spend similar amounts in the county due to working there; therefore the spending impact of these workers is not attributed to the border crossing. Those coming for the purpose of 'home' are those living in the county, and so are excluded as visitors.

[34] In the MDOT survey, 80.2% of all Canadian traffic with a destination of St. Clair County were Canadian visitors—that is, those not visiting for the purpose of work or home. The average daily Canadian traffic was estimated to be 1,357 while the average daily traffic for Canadian visitors was estimated to be 1,089. Since the average car of a Canadian visitor had 1.75 passengers, the total Canadian visitors for 2009 is estimated to be 696,461.

[35] Ideally, a series of visitor intercept surveys throughout the year should be conducted. Due to budget constraints, only one intercept survey was conducted.

spending two days while 13 said they usually spend three to four days. In total, the average respondent spent 1.3 days per visit.

The vast majority (96%) of the Canadian visitors surveyed by Chmura stated that they visit St. Clair County at least once per year. Slightly less than a quarter of the respondents (23%) reported visiting weekly while close to a third (32%) said they visited from one to four times per month. Four percent of the sample said they do not make repeat visits to the area, representing first-time and one-time only visitors.

Most all of the Canadian visitors were from the province of Ontario. More than a third of the sample respondents (35%) were from Sarnia with an additional 4% being from somewhere else in Lambton County. London accounted for 16% of respondents and Toronto for 4%. Over half (55%) of the respondents reported living within an hour's drive of the border crossing.

Chmura's intercept survey showed that the average Canadian visitor spent $77.03 per day while in St. Clair County. The largest portions of spending were for apparel ($26.88), food ($20.25), and gas ($17.50). Other spending went toward liquor and tobacco ($5.18), entertainment and recreation ($3.53), and lodging ($2.91)—with relatively small amounts for services, repairs, or other expenses. The survey also indicated that those who visit only for shopping and dining purposes spent more per person per day ($90.38) than those who were purely social visitors ($35.69) or for all other visitors ($70.68).

The spending figures from this survey are similar in scale to the figures in the DK&S study quoted in Section 4.4., but larger than spending figures from the 2003 Longwoods study. There are several reasons for the differences with the latter study. First, the Longwoods study included daily commuters as well as people simply passing through the state and not staying overnight. Furthermore, about 22% of the Longwoods sample comprised respondents visiting friends or relatives, the type of visitor that is typically expected to spend less than those with the traveling purpose of shopping or recreation.

Since the Blue Water region is right on the border along a popular border crossing, it is a destination spot for Canadians wanting to shop, therefore boosting the average spending rate found in the survey. Moreover, the intercept survey was conducted primarily at retail locations and was thus more likely to intercept shoppers and less likely to intercept daily commuters. The lack of influence of commuter spending in the intercept surveys will not be an issue with these data, however, as Canadians traveling into St. Clair County are being excluded from the visitor spending calculations shown below.[36] The retail intercept survey locations are also not ideal for measuring the percentage of visitors coming to the county only for a social visit. For social visitors, the Blue Water survey included 10% of respondents who typically visit the county only for a social visit, higher than the 6% of Canadians crossing the Blue Wager Bridge for this purpose as found in the MDOT bridge survey; therefore, this group will need an adjustment.

The spending patterns shown below are adjusted according to the distribution of traveling purposes found in the MDOT survey since this survey was (1) larger than the retail intercept survey and (2) at a location better suited for getting a representative sample of visitors. Therefore among Canadian visitors to the county (excluding those

[36] Moreover, while Canadians who work in St. Clair County will spend money there, it is assumed that the jobs held by these workers will be filled even if the border were shut down, in which case the workers would be likely from the United States. These workers would spend similar amounts in the county due to working there; therefore the spending impact of these workers is not attributed to the border crossing.

traveling for purpose of work or home), we are assuming 69% traveled for the purpose of shopping or dining, 7% for a social visit, and the remaining 24% for other purposes.

Table 6.13: Estimated Total Spending by Canadian Visitors

	Average Spending Per Person Per Day (Chmura Survey)	Estimated Total Spending by Canadian Visitors	Estimated State Sales Tax
Apparel	$26.88	$21,101,832	$1,266,110
Food	$20.25	$15,290,164	$917,410
Gas	$17.50	$12,541,742	$752,505
Liquor/Tobacco	$5.18	$3,192,910	$191,575
Entertainment Recreation	$3.53	$2,375,248	$0
Lodging	$2.91	$1,983,495	$0
Service/Repairs	$0.43	$195,597	$0
Other	$0.35	$290,853	$0
Total	$77.03	$56,971,842	$3,127,599

Source: Chmura Economics & Analytics

It is estimated that Canadian visitors to St. Clair County will spend a total of $57.0 million in the county in 2009. In 2007, the total sales receipts for the leisure sector (retail, food, lodging, and entertainment industries) in St. Clair County were estimated to be $752.9 million.[37] Canadian visitor spending is therefore expected account for over 7% of total leisure industry revenue in the county. Michigan has a 6% sales tax rate for retail businesses, meaning that Canadian visitor spending is estimated to contribute $3.1 million in annual state sales tax revenue.

Better than half of the respondents (53%) cited credit cards as their usual form of payment. More than half (55%) said their usual form of payment was U.S. currency while 8% reported Canadian currency as their typical payment form. Some respondents reported more than one usual payment form. For example, 15% said both U.S. currency and credit cards were their usual payment form.

6.9. Border-Related Business Impact Summary

To summarize, border-dependent businesses play a sizable role in the economic and social life of St. Clair County. While 5.8% of workers in St. Clair County are employed in border-dependent businesses, they account for 8.0% of the total payroll in the County. Canadian customers and border-related businesses provide about 2.5% of other business in St. Clair County, from banking and insurance to education and health care. In 2008, Canadian visitor spending and sales of the surveyed business sectors to Canadian customers and border-dependent businesses accounted for at least $109.7 million.

[37] Source: IMPLAN Pro 2007.

Table 6.14: Border Related Economic Impact Summary		
	Estimated Border Related Impacts	% County Total
Employment and Sales of Border Related Business		
Total Employment of Border Related Business	2,399	5.8%
Total Payroll of Border Related Business	$114,795,393	8.0%
Machinery & Equipment Purchase by Canadian Firms	$540,000	NA
Total Export from St Clair County	$1,144,340,438	NA
Sales to Border Related Businesses or Canadian Customers	**$111,187,262**	**2.5%**
Utility	**$50,000,000**	3.4%
Health Care	**$1,906,938**	**0.3%**
Heath Care	$1,471,712	
Pharmacy	$435,226	
Financial and Professional Service	**$1,680,489**	**0.3%**
Banking	$875,530	
Financial Accounting	$30,000	
Legal	$12,500	
Insurance	$734,959	
Temporary Employment Sector	$27,500	
Culture and Education	**$617,898**	**0.7%**
Media	$81,624	
Education	$536,274	
Real Estate	**$10,095**	**0.0%**
Commercial Real Estate	$0	
Marina	$10,095	
Canadian Visitor Spending	$56,971,842	**7.6%**

Source: Chmura Economics & Analytics

The impact of the Blue Water border crossing is especially significant for particular industry sectors in St. Clair County. For example, 17% of the county's manufacturing employment works in Canadian-owned businesses and over 7% of the county's leisure industry sales are to Canadian visitors. Without the border crossing, those industries would suffer more than the health care, financial, and professional service sectors.

6.10. Other Impacts

In addition to the results in this analysis, the border crossing has other impacts on St. Clair businesses beyond the scope of this report.

While this study estimated the total spending of Canadian visitors to St. Clair County, county businesses also benefit from U.S. visitors passing through St. Clair County on their way to or back from Canada. Those visitors may stop at businesses such as gas stations, hotels, and restaurants in the county. Estimating these visitors' spending patterns and total spending amount was beyond the scope of this study, yet this is a further economic impact for the county due to the border crossing that may wish to be measured in subsequent replications.

The list of border-dependent firms used in this study (see Appendix: Survey Report, A15) was developed in cooperation with the Blue Water Chamber and Consul General of Canada in Detroit (for the identification of Canadian-owned businesses). Nevertheless, it can be argued that other businesses in the Blue Water Area not on this list benefit to some degree from the close proximity to the border and activities generated by traffic from the border crossing and therefore, to some degree at least, can be considered "border-dependent." For example, a manufacturer in the area may benefit from the border-crossing by having suppliers in Canada. Since an exhaustive detailing of this cohort was beyond the scope of this study, and since this cohort is likely larger than was assumed for this project, the effect measured here can be taken as a conservative measure of this impact.

Another impact of the border crossing not quantified in this report relates to the secondary economic benefits precipitating from the cultural benefits of the border crossing. For example, because of the increased exposure and interactions with Canadian culture due to the border crossing, the Blue Water Area is enhanced culturally. Diverse cultural regions are generally viewed as more desirable places to work and live. Thus, businesses benefit from this effect as it makes it easier to attract and retain workers. The advantages of a larger labor pool, and perhaps lower turnover due to the enhanced attractiveness of the region, are further economic benefits not measured here.

With an open border, the Blue Water Area has access to a wider labor pool. Therefore, some businesses in St. Clair may be able to find and use higher-skilled labor than they would be able to otherwise—not that the Canadian labor is necessarily higher-skilled, but a larger labor pool would likely have more diversity of skills and therefore businesses would be more likely to be able to find workers with the specific skill-sets that matches their needs. In addition, some businesses may be able to pay some workers a lower average wage or benefits package than they would be able to otherwise. These effects would boost overall productivity of the firms in the St. Clair region—though this impact is not quantified in this report.

In addition, the Blue Water border crossing presents St. Clair County with several economic opportunities, the first being advantages in developing its competitive industry clusters. Compared with other southeast Michigan communities, with the exception of Detroit, St. Clair is the prime location for businesses involved in international trade, transportation, and professional businesses servicing those trade and transportation activities. The county has a competitive advantage in the warehousing and transportation sector. But there are other related professional businesses, such as international marketing, export finance, insurance, trade law, and shipment arrangement that could be attracted to the county. Those professional services can create high-paying job opportunities.

The border crossing also can help St. Clair County alleviate its unemployment problems. Michigan has highest unemployment rate in the nation. In August 2009, the unemployment rate in Michigan was 15.6%. The unemployment rate in St. Clair County was even higher, at 18.7% in August 2009.[38] The trade sector could be a boon as the Michigan economy moves away from its traditional reliance on manufacturing, especially automobile industries. Although many manufacturing jobs have been lost in the region, international trade is a growing sector. From 2000 to 2008, the total bilateral trade between Canada and United States grew 4.9% per year.[39] Former manufacturing workers can transition successfully into transportation and warehousing industries, as they require similar skills. The manufacturing buildings in the county can be reconfigured into warehouses for international trade purposes.

Many border communities in the United States (with Canada as well as Mexico) also have developed strength in retail and tourism industries that attract cross-border consumers. Medical tourism is becoming popular in recent years as Canadian consumers seek health care in the United States to avoid the wait in Canada. With a focused marketing effort, the close proximity to Canada can help St. Clair County develop a strength in this area.

[38] Source: Michigan Department of Energy, Labor, and Economic Growth. http://www.milmi.org/.

[39] Source: U.S. Census Bureau. http://www.census.gov/foreign-trade/balance/c1220.html#2006.

7. Economic Impacts of the Blue Water Bridge Plaza Project

The Michigan Department of Transportation is undertaking a project to improve the Blue Water Bridge Plaza. The purpose of this project is to redesign and expand the plaza on the Michigan end of the Blue Water Bridge to improve efficiency and accommodate increased future bridge traffic. In addition, the project will improve the main roads and access roads leading to the Blue Water Bridge Plaza and relocate the Michigan Welcome Center currently at the plaza.

The initial study of this project started in 2002. The Draft Environmental Impact Statement (DEIS) was completed in August 2007, which studied several alternatives. After holding public hearings and incorporating public comments, the Final Environmental Impact Statement (FEIS) was completed in March 2009, which identified the Selected Alternative. In May 2009, the Federal Highway Administration (FHA) issued its Record of Decision (ROD), which allowed project to proceed to the design phase.

This section addresses the potential economic impacts of the Blue Water Bridge Plaza project. Generally speaking, three types of benefits are associated with transportation projects like this: temporary construction impact; increased economic efficiency; and strategic development or business-attraction effects. The most direct and visible new investments and business ventures as a result of an improved Blue Water Bridge Plaza are roadside services. Entrepreneurs and established corporations will build gas stations, truck stops, motels, and restaurants near the border crossing to serve drivers. To estimate the potential new services as a result of increased traffic, Chmura used a "model-by-analogy" approach. Essentially, Chmura considered previous studies and regression models containing roadside service data on highway investment. These models estimate the quantitative relationship between the number of new businesses and a few key factors such as average daily traffic.

After the direct new business ventures were estimated, Chmura used the IMPLAN model to estimate the ripple economic impacts of these new businesses on St. Clair County.

7.1. Summary of the Blue Water Bridge Plaza Project

7.1.1. Location of the Blue Water Plaza Project

The Blue Water Bridge Plaza is in St. Clair County in southeastern Michigan. The area directly affected by this project is in the city of Port Huron and Port Huron Township. The project begins at the western end of the Blue Water Bridge and ends about 2.2 miles to the west.[40] The selected plan will expand the U.S. plaza and improve 2.5

miles of the I-94/I-69 corridor west of the plaza. The expanded plaza area is bordered by Hancock Street on the

[40] See Appendix for a map of the project.

north, 10th Avenue to the east, and relocated Pine Grove Avenue to the south and west. Improvements to the I-94/I-69 corridor include the replacement and widening of the Blue Water Bridge to nine lanes to accommodate the separation of local and international traffic, reconstruction of the Water Street interchange, reconfiguring the Lapeer Street Connector interchange to provide full access, and the relocation of the Michigan Welcome Center.

Three points provide access to the Blue Water Bridge Plaza from locations in Port Huron: the Lapeer Street Connector, Water Street interchange, and Pine Grove Avenue interchange (Table 7.1). As a result, most of the businesses serving travelers and businesses will be clustered around those three interchanges.

Table 7.1: Blue Water Bridge Plaza Project Area

Interchange	Cross Roads
I-94/I-69 Interchange (West End)	
Lapeer Street Connector	Lapeer Street
Water Street	Water Street
Pine Grove Avenue (Plaza)	Pine Grove Avenue
Blue Water Bridge (East End)	
Source: MDOT and FEIS for Blue Water Bridge Plaza	

7.1.2. Traffic Impact

Both increased economic efficiency and business attraction will be affected by projected traffic to the Blue Water Bridge and surrounding roads. Consequently, the first step in analyzing the economic impact of the Blue Water Bridge Plaza project is to estimate traffic patterns and volumes after project completion. This study looks at the impact as of 2030, even though the project could be completed in 2017.[41]

Table 7.2 shows the projected average daily traffic (ADT) on Blue Water Bridge for 2030.[42] In 2005, the average daily traffic on Blue Water Bridge was 4,906 trucks and 10,178 passenger vehicles. Two forecasts were developed via a travel-demand model by MDOT for truck traffic. It is projected that the average traffic volume will increase to 10,032 trucks in 2030 in the high scenario and 7,880 in the low scenario. The ADT for passenger vehicles is forecast to be 12,292 in 2030. The traffic projection implies that truck traffic is expected to grow much faster than passenger traffic. The truck traffic was forecast to grow 2.9% per year in the high scenario and 1.9% per year in the low scenario. In contrast, passenger traffic was expected to grow 0.8% per year, a possible result of the slow population growth in the St. Clair area. Despite slow population growth, increased globalization and economic links between Canada and United States imply that truck traffic will grow at a healthy pace.[43]

Table 7.2: Average Daily Traffic (both directions) on Blue Water Bridge

Year	Truck	Passenger Vehicle	Total

[41] The traffic projection by Michigan Department of Transportation forecasts 2030 traffic as a long-term benchmark.
[42] The Year 2030 was chosen by MDOT in its travel demand simulation.
[43] In the following analysis, the average of high and low scenarios is used in estimating the economic impacts.

2000	4,320	12,028	16,348
2005	4,906	10,178	15,084
2030 (High Scenario)	10,032	12,292	22,324
2030 (Low Scenario)	7,880	12,292	20,172
Note: Passenger Vehicles include cars, vans and light trucks			
Source: MDOT and FEIS for Blue Water Bridge Plaza			

7.2. Economic Impact of the Blue Water Bridge Plaza on St. Clair County

7.2.1. One-time Impact of Construction

During the construction phase, the construction of Blue Water Bridge Plaza will create jobs in construction and related industries such as design and site development in St. Clair County. In turn, the construction companies will boost their purchasing from suppliers. As a result, the construction will bring more sales to local suppliers, some of which will see enough sales to add employees.[44] In addition, area restaurants and shops will benefit as the construction workers spend their income at local establishments.[45] The economic impact of construction is temporary, however, lasting only during the building phase.

The cost of the project is expected to be $445.5 million (in 2008 dollars).[46] Of that total, $150.0 million is the cost for rights-of-way. The money spent on rights-of-way represents a transfer of property, which will not generate additional economic impact in St. Clair County. The rest of the construction costs include pre-construction design and engineering work and the construction of the road and bridges. Different types of spending will impact industries in the region with varying magnitudes. Among estimated project costs, the major expenditure categories include engineering (5% of the total cost), construction of roads (14% of the total), bridges (10%), and buildings (28%). The cost estimates are displayed in Table 7.3.

Table 7.3: Construction Cost Estimate of Blue Water Bridge Plaza ($Million, 2008 Dollars)

	I-94/I-69 Corridor	Blue Water Bridge	Plaza	Total	% of Total
Roadway	$13.9	$2.8	$46.0	$62.7	14%
Drainage	$1.7	$0.6	$2.8	$5.1	1%
Maintaining Traffic	$1.5	$0.3	$4.1	$5.9	1%
Bridge Cost	$6.0	$28.5	$10.7	$45.2	10%
Markings/Signs/Signals	$1.7	$0.5	$3.8	$6.0	1%
Buildings	$12.5	$10.7	$102.4	$125.8	28%
Sub-station Relocation	$0.0	$0.0	$20.8	$20.8	5%
Rights-of-Way	$0.0	$0.0	$0.0	$150.0	34%
Construction Engineering	$3.7	$4.3	$16.2	$24.2	5%
Total	**$41.0**	**$47.7**	**$206.8**	**$445.5**	**100%**

Source: Blue Water Bridge Plaza Study Final Environmental Impact Statement

[44] This is referred to as the indirect impact.
[45] This is referred to as the induced impact. The sum of the indirect and induced impact is referred to as the ripple impact.
[46] Source: Michigan Department of Transportation, FEIS of Blue Water Bridge Plaza.

The construction of the project is expected to last from 2009 to 2016, beginning with design from 2009 to 2010 and acquiring rights-of-way from 2009 to 2012. Construction activities are expected to occur from 2010 to 2016.[47] Based on this timeline, Chmura allocated engineering expenses equally to 2009 and 2010 and construction spending equally from 2011 to 2016.

Table 7.4 displays the one-time economic impact of the construction of the Blue Water Bridge Plaza project on St. Clair County. From 2009 to 2016, the design and construction of the project are estimated to generate a total of $439.6 million in the region. This total is the sum of $300.0 million[48] in direct spending and $139.6 million of ripple economic impact from the construction activities. As expected, the construction industry will experience the largest one-time benefit. Ripple impacts[49] are distributed among local suppliers and service providers who will benefit from construction workers spending their income at local establishments. On average, the economic impact is estimated to be $48.8 million yearly from 2009 to 2016, with $33.3 million as direct economic impact and $15.5 million as ripple impacts.

The construction of the Blue Water Bridge Plaza is estimated to directly create an annual average of 291 jobs in the St. Clair County from 2009 to 2016, causing a ripple effect that will result in 135 additional jobs in the region per year. In total, the construction phase is expected to result in the creation of 426 jobs per year.

Table 7.4: Economic Impact of Construction on St. Clair County (2009-2016)

		Direct	Ripple	Total
Total (2009-2016)	Spending ($Million)	$300.0	$139.6	$439.6
	Employment	2,621	1,218	3,839
Average Annual	Spending ($Million)	$33.3	$15.5	$48.8
	Employment	291	135	426

Note: Figures may not sum due to rounding
Source: IMPLAN Pro 2007

7.2.2. Travel Efficiency and Cost Savings

While the economic impact of construction activity ends when building is completed, the Blue Water Bridge Plaza project will generate sustained economic impacts for St. Clair County.

All existing businesses and residents in St. Clair County can benefit from the new roads, bridges, and plaza[50] as a result of reduced travel cost—primarily the time waiting to pass U.S. border inspections. Though the improved traffic flow may also reduce accidents, those benefits are not quantified in this analysis.

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[47] Source: Michigan Department of Transportation, FEIS of Blue Water Bridge Plaza.
[48] This figure does not include spending on rights-of-way. In addition, the IMPLAN model estimates that 95% of the construction spending on highways is spent locally. For example, some of the design work is performed outside of the region.
[49] Ripple impacts are defined as the secondary economic impacts derived from the direct spending. In this study, ripple impacts are the sum of indirect (secondary impacts enjoyed by suppliers) and induced impacts (secondary economic impacts as a result of household income). See the appendix for more explanation.
[50] Businesses outside St. Clair County also will benefit. Estimating those benefits is beyond the scope of this study. The new businesses that could be attracted by the project are analyzed in Section 7.2.3.

The time savings was estimated through a simulation model based on the amount of traffic and the total time saved with the new Blue Water Bridge Plaza versus a no-build scenario. As Table 7.5 shows, the planned Blue Water Bridge Plaza project could provide significant time savings for businesses and residents in the region. For example, during peak hours,[51] the average wait for commercial vehicles is 23.7 minutes under the no-build scenario. The delay time is reduced to 3.1 minutes after the project is completed, resulting in a time savings of 87% for commercial vehicles. The time savings for passenger vehicles is 89%.

Table 7.5: Average Delay during Peak-Hour (Minutes/Vehicle)

	No-Build 2030	Preferred Route 2030	Time Savings
Commercial	23.7	3.1	87%
Passenger	31.8	3.4	89%
Average	28.4	3.3	88%

Source: Blue Water Bridge Plaza Study Final Environmental Impact Statement

Chmura used the following method to convert time savings into a dollar amount: Chmura assumes that only vehicles traveling during peak hours, or 11% of the time, will benefit from the time savings.[52] Among those, only 6.7% of commercial vehicles and 39.1% of passenger vehicles are considered to start or end their journeys in St. Clair County.[53] The rest of the vehicles will bring efficiency gains to businesses outside the county. Based on those assumptions, the annual time savings for St. Clair businesses and residents is estimated to be 4,041 hours in 2030. The value of travel efficiency and cost saving is assumed to be $2.8 million in 2030.

Table 7.6: Travel Efficiency and Cost Saving

	2030 ($Million)
Commercial	$0.2
Passenger	$2.6
Total	$2.8

Source: Chmura Economics & Analytics

7.2.3. Economic Impact of Service Businesses

7.2.3.1. Job Creation in Service Businesses

The most direct and visible new jobs created by the Blue Water Bridge Plaza project will be in businesses serving motorists along the roads and plaza. Entrepreneurs and established corporations will build gas stations, hotels, and restaurants near interchanges to serve drivers who pass through as well as local residents. In addition, the plaza

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[51] Peak hours are defined as mid-week (Tuesday, Wednesday, and Thursday) and daytime (10 a.m.—4 p.m.). Source: FEIS of Blue Water Bridge Plaza.

[52] Mid-week daytime is considered peak. It is three out of seven days, and six hours out of 24 hours. This estimate is very conservative, as vehicles traveling other times may also see delays reduced. The MDOT traffic model only conducted delay analysis during peak hours.

[53] Source: From MDOT Bridge Intercept Survey, it is estimated that for all commercial traffic, 67% of vehicles begin or end their trips in St Clair County, and 39.1% of passenger traffic starts or finishes their journey in St. Clair County.

will play host to federal and state agencies for border inspection. Those federal and state agencies include the Bureau of Customs and Border Protection (CBP), the United States Department of Agriculture (USDA), the United States Food and Drug Administration (FDA), the General Services Administration (GSA), and the Michigan Department of Transportation (MDOT).

To estimate the potential service businesses that could be located near the Blue Water Bridge Plaza project, this study utilizes a "model-by-analogy" approach. Essentially, Chmura considered previous regression models built with service business data on completed interstates in urban, suburban, and rural regions. These models estimated the quantitative relationship between the number of service businesses and a few key factors. The following five variables have an impact on the development of service businesses at interchanges along an interstate highway:

1. Average daily traffic (ADT) on the interstate
2. ADT on crossroads
3. Distance to the nearest major urban center
4. Design type (diamond or cloverleaf) of the interchange
5. Distance to the next interchange or intersecting interstate

Based on the projected traffic, Chmura classified the three interchanges in the project area into two development stage categories: economic integration and heavy tourist service.[54]

- Economic integration interchanges are close to a town and have a high volume of traffic. These interchanges have more gas stations, hotels, and restaurants because they serve motorists as well as local residents. Water Street interchange and Lapeer Street Connector belong in this category.
- Heavy tourist intersections have the highest traffic volume and are close to another interstate. Pine Grove Avenue interchange belongs in the heavy tourist category. Each heavy tourist intersection can support more than six hotels, in excess of six restaurants, and multiple gas stations.

Table 7.7 lists the projected service establishments that can be supported in the project area. In 2030, it is estimated that 38 businesses will serve Blue Water Bridge Plaza. Among them are ten motels, nine gas stations, seven fast-food restaurants, and seven full-service restaurants.[55] In terms of jobs, those businesses and government agencies are estimated to support 993 workers in 2030. The permanent businesses and jobs include five federal and state agencies with 485 positions.[56]

Table 7.7: Projected Businesses and Employment in Roadside Services

	Establishment	Employment
Motels	10	181
Gas Stations	9	71
Fast-Food Restaurants	7	128
Sit-Down Restaurants	7	128
Government Agencies	5	485

[54] The Appendix lists the criteria and business activities of each intersection category.
[55] Due to the fact that this project is an upgrade of several roads and plazas, the projected businesses are not entirely new. Some businesses may have existed.
[56] Source: Blue Water Bridge Plaza Study Final Environmental Impact Statement.

Total	38	993
Source: Chmura Economics & Analytics		

7.2.3.2. Economic Impact of Service Businesses

While spending by motorists at service businesses can bring millions of dollars to the economy, service businesses also have ripple effects throughout St. Clair County, both indirect and induced. Indirect effects are generated when local industries support restaurants, gas stations, and other visitor-service businesses. Money spent by customers in roadside restaurants and hotels also increases the sales of the suppliers for these industries. The induced effect is caused by increased income of workers employed by service businesses. These workers will in turn spend some of their income in the region, thus injecting more money into the economy.

The annual total economic impact of service businesses on St. Clair County is estimated to be $246 million in 2030 (Table 7.8). Of this, $112 million is direct spending on food, lodging, and gas at service establishments. About $134 million is derived from indirect and induced economic impacts. In terms of job creation, spending at the project corridor can potentially support 1,199 jobs for the county. Of these, 993 jobs will be located at service businesses and state and federal agencies in the Blue Water Bridge Plaza area, while 225 jobs will be created by ripple spending effects.

Table 7.8: Economic Impact from Roadside Service on St. Clair County (2030)

	Direct	Ripple	Total
Spending ($Million)	$112	$134	$246
Employment	993	206	1,199
Source: IMPLAN Pro 2007 and Chmura Economics & Analytics			

It needs to be noted that the jobs that can be supported by Blue Water Bridge Plaza project are not entirely new. For example, there are currently 267 jobs in public border-related agencies while the plaza project is projected support a larger presence among those agencies.

7.3. Blue Water Bridge Plaza Economic Impact Summary

The economic impact of the Blue Water Bridge Plaza project on St. Clair County is listed in Table 7.9. The ongoing economic impact, measured in 2030 dollars, is estimated to be $249.2 million in 2030, generating 1,199 jobs in the county. In addition, the construction of the Blue Water Bridge Plaza project is estimated to generate an annual economic impact of $48.8 million and 426 jobs in St. Clair County.

Table 7.9: Blue Water Bridge Plaza Economic Impact Summary

	Total Economic Impact ($MM)	Total Job Creation
Average Annual One-time Construction Impact (2009-2016)		
Construction	$48.8	426
Annual Ongoing Impact (2030)		
Cost Savings (Productivity)	$2.8	

Roadside Services	$246.4	1,199
Total: St. Clair County 2030	**$249.2**	**1,199**
Source: Chmura Economics & Analytics		

Appendix A: Survey Report

A1. Canadian-Owned Firms Survey

A1.1. Methodology

The contact list was initially developed using the commercially available lists described in the *Survey Methodology* section in the main body of this report. Further crucial assistance in identifying Canadian-owned firms in the St. Clair County, however, was provided by the Canadian Consulate General.

Respondents in this sector were asked for two items: (1) an estimate of the value of machinery and equipment their firm purchased from suppliers in St. Clair County during the 2008 calendar year and (2) contact information verification—for potential follow-up. Due to its brevity, this survey was conducted by telephone.

A1.2. Results

The Canadian-owned firms in the sample indicated that they spent between $270,000 and $275,100 on machinery and equipment in 2008 from suppliers in St. Clair County. These data are based upon responses from 11 firms.

A list of 31 establishments was compiled for targeting for this survey. Because some of the establishments were part of the same company, this list reflected 28 unique businesses. Of these 28, three were discovered to be no longer in business in the study area or misclassified. Though 12 replies were received for this survey, one of the respondent firms was not physically located in St. Clair County and therefore did not contribute to expenditure results reported here. From the adjusted population of 24, 11 replies were gathered and used, for a 46% participation rate. The respondent firms, however, accounted for the vast majority of employment in this sector. Based on employment estimates in the contact lists used for this survey, the respondent firms accounted for 93% of the employment of this sector.

A2. Utilities Survey

A2.1. Methodology

Due to the small size of this sector and the brevity and technical nature of the questionnaire, this survey was conducted entirely by telephone. Initial and follow-up phone calls for this survey were placed from April through June 2009.

A2.2. Results

This survey questioned utility companies about the volume and value of natural gas and electrical energy purchased from Canada for use in St. Clair or purchased in St. Clair for use in Canada. One of the firms replied that it purchased tens of millions of dollars of natural gas from Canada for use in St. Clair but this purchase had nothing to do with proximity to Canada, but instead relies, for example, on a pipeline in the upper Midwest. All other replies to the questionnaire were ”zero.”

A population of 12 firms was identified for this survey, though one had a disconnected phone number and could not be contacted. Five responses were obtained from the adjusted population of 11 for a 45% participation rate.

A2.3. Questionnaire

1. In 2008, what was the estimated volume and value of natural gas your firm purchased from Canada for use in St. Clair County? ______________ & $__________
2. In 2008, what was the estimated volume and value of natural gas your firm purchased from facilities in St. Clair County for use in Canada? ______________ & $__________
3. In 2008, what was the estimated volume and value of electrical energy your firm purchased from Canada for use in St. Clair County? ______________ & $__________
4. In 2008, what was the estimated volume & value of electrical energy your firm purchased from facilities in St. Clair County for use in Canada? ______________ & $__________
5. Contact Information: Name ________________________________
   Title __________________________________
   Phone Number ________________________

A3. Health Care Survey

A3.1. Methodology

This survey was conducted primarily by mail. The initial response to the mailing was strong in this sector, yet a high response rate was not obtained from among the crucial largest employers in the sector. Therefore, to boost the response rate overall and especially among the large employers, follow-up telephone calls were placed to the largest organizations (based on employment) that did not respond by mail.

There were 423 organizations identified as part of the health care sector in St. Clair County. After mailing out the surveys, 34 were returned as undeliverable. Of the remaining 389 organizations, 69 replied for an 18% response rate. Three of the responses, however, were from businesses that were closed and their survey responses simply stated this fact. In the end, six of the ten largest employers participated in the survey.

A3.2. Results

Based on employment and sales estimates from the commercially provided contact list, the respondent sample represented 41% of the health care business population in terms of both sales and employment.

The 66 respondent health care businesses reported serving 1,043 Canadian patients in 2008. Nearly three-quarters (73%) of these patients were served by just two of the organizations. Overall, 41% of the health care respondents stated that they served one or more Canadian patients in 2008.

Revenues from Canadian patients in 2008 totaled $603,402 among the respondents in the sample. These revenues were for 1,031 patients—not the complete total reported as three of the respondents with Canadian patients did not report revenue. On average, $585 per Canadian patient was generated in revenue in 2008 among the survey sample.

Among the respondents, the value of ancillary services (such as hotel, restaurant, and transportation) used by Canadian patients while in St. Clair County in 2008 was estimated to be $26,300. Non-zero amounts in this category were reported by four respondents.

One respondent reported $200 of capital expenditures in 2008 that were made expressly for the purpose of attracting Canadian customers.

A3.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If it is impractical or impossible to answer a question, please place an 'X' through that question.

1. Approximately how many Canadian patients* did your organization serve in 2008? _________

2. If applicable, estimate the value of the below expenses your firm provided in 2008 in regard to **Canadian** patients:

	Value in 2008
Patient Revenues	$
Value of Ancillary Services (such as hotel, restaurant, and transportation used by your Canadian patients while in St. Clair)	$
Capital Expenditures (made expressly for the purpose of attracting Canadian patients)	$

3. Contact Information: Name ______________________________
Title ________________________________
Organization _________________________
Phone Number _______________________

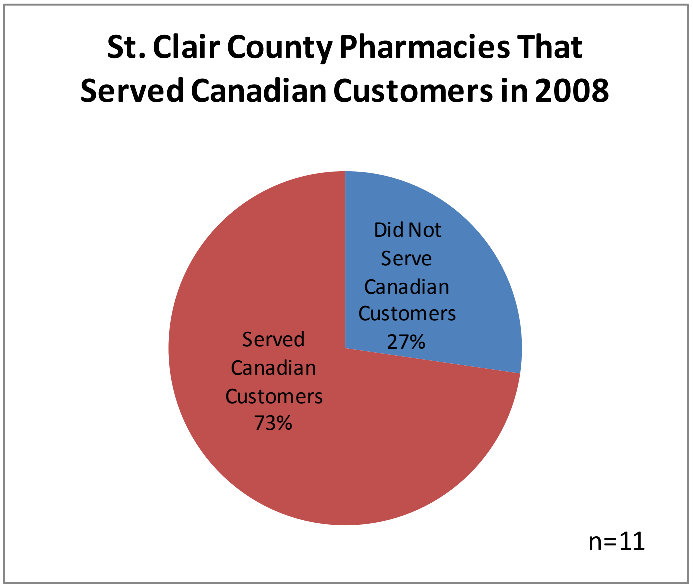
*Each patient should be counted only once.

A4. Pharmacy Survey

A4.1. Methodology

The pharmacy sector survey was first sent to potential respondents through the mail. To further boost the response rate, follow-up phone calls were placed to each business in the sector that had not responded.

A4.2. Results



Of the respondent pharmacies, 73% reported serving Canadian customers in 2008. The number of customers served per respondent varied from a couple to 1,000. In addition, several respondents could only report their estimates in terms of percentages with two saying 2% to 3% of their customers were Canadians and two others estimating 10% of their customers as Canadians.

In all, the respondent sample reported an estimated $200,302 in pharmacy sales to Canadian customers in 2008, which is about 1.4% of total sales of the pharmacies reporting estimated sales amounts. Of the 11 pharmacies in the sample, three could not estimate the value of their sales to Canadians. For those who had sales and could estimate the value, estimates of total sales to Canadians in 2008 varied from $52 to $150,000. Two respondents reported ranges of sales and mid-points were taken as estimates. One firm reported a percentage of total sales and the sales estimate from the contact list was used to calculate the value of sales to Canadian customers.

Twenty-three firms were identified as the population in this sector, though one was found to be out of business and two others were unable to be contacted. Out of the adjusted population of 20, 11 replies were received for a 55% participation rate.

A4.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are “zero,” please return the survey as this information is important to us.

1. Approximately how many Canadian customers* did your organization serve in 2008? _________
2. Estimate the value of the sales in 2008 your firm made to Canadian customers:

	Value in 2008
Sales	$

3. Contact Information: Name ________________________________
   Title __________________________________
   Organization ___________________________
   Phone Number __________________________

*Each customer should be counted only once.

A5. Banks Survey

A5.1. Methodology

The survey for this sector was conducted through initial telephone contacts followed by sending and receiving survey results by fax or e-mail. The telephone for initial contacts was chosen for two reasons: (1) because of the sensitive nature of the questions and (2) because the contact list contained many groups of multiple bank branches and identifying a proper contact for each group of branches needed to be part of the process.

Per the project RFP, the initial questions were developed to find the estimated aggregate account balances in 2008 in term and demand accounts for Canadian individuals, Canadian businesses not in St. Clair County, and for the three groups of border-dependent organizations. However, the overwhelming response from banks was that these questions were of too sensitive a nature and the data could not be released. Therefore, the questions were modified as shown below.

A5.2. Results

What Percentage of Business Customers Are Canadian-Owned Firms?	
0%	7
less than 1%	1
less than 5%	1

Of the nine respondents in the banking sector, seven had no Canadian-owned firms as business customers. One reported less than 1% of business customers as being Canadian-owned and one other respondent reported less than 5% as being Canadian-owned.

What Percentage of Personal Banking Customers Are Canadians?	
0%	5
less than 1%	2
less than 5%	2

Four of the nine banking respondents reported having Canadian personal banking customers. Two of these reported less than 1% of all their personal banking customers being Canadian and the other two reported less than 5% of all personal banking customers being Canadian.

Fifteen unique banks were identified as being part of this sector, though one was subsequently learned to be no longer in business in the region and one other had a disconnected number and could not be contacted. Of the remaining population of thirteen banks, nine participated in the survey for a 69% participation rate.

A5.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are “zero,” please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an ‘X’ in that place.

1. Approximately what % of your business customers are Canadian-owned firms? ___________

2. Approximately what % of your personal banking customers are Canadians? ___________

3. Contact Information: Name ________________________________
   Title _________________________________
   Phone Number ________________________

A6. Financial Accounting Survey

A6.1. Methodology

The financial accounting survey was initially sent to potential respondents through the mail. To get a higher response rate, follow-up was conducted over the telephone with copies of the survey sent and received by fax or e-mail as needed.

A6.2. Results

	Value of Services Provided in 2008
Public Border-Related Agencies	$ 0
International Border Businesses	$ 0
Canadian-Owned Businesses in St. Clair County	More than $ 10,000
Canadian-Owned Businesses NOT in St. Clair County	More than $ 15,000

Among the respondent group of financial accounting firms in St. Clair County, none provided services in 2008 to public border-related agencies or to international border businesses. However, more than $10,000 of services was provided to Canadian-owned businesses in St. Clair County in addition to more than $15,000 in services to Canadian-owned businesses outside the county.

Because of the small number of respondents with non-zero responses, the results presented in this section are shown as a range instead of the exact number for confidentiality purposes.

Six responses were gathered in this sector out of a population of eleven businesses, for a 55% response rate. Three of the firms verbally declined to participate while replies were not received from the remaining two. According to estimates of the business sales volume in the commercially provided contact lists, the six respondent firms accounted for at least three-quarters of the sales volume in this sector.

A6.3. Questionnaire

The questionnaire, below, was accompanied by the list of border-related businesses shown in section A15.

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place.

1. Aggregate estimated dollar value of accounting services in St. Clair County provided to the following groups of businesses in 2008:

	Value of Services Provided in 2008
Public Border-Related Agencies (List A)	$
International Border Businesses (List B)	$
Canadian-Owned Businesses in St. Clair County (List C)	$
Canadian-Owned Businesses NOT in St. Clair County	$

2. Contact Information: Name ________________________________
Title ________________________________
Phone Number _________________________

A7. Legal Survey

A7.1. Methodology

The legal sector survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, follow-up phone calls were placed to each business in the sector that had not responded at that point.

A7.2. Results

	Value of Legal Services Provided in St. Clair in 2008
Public Border-Related Agencies (List A)	More than $2,500
International Border Businesses (List B)	$ 0
Canadian-Owned Businesses in St. Clair County (List C)	$ 0
Canadian-Owned Businesses NOT in St. Clair County	$ 6,000

Among the sample of legal firm respondents, legal services of at least $2,500 were provided to public border-related agencies in 2008. This figure is presented as a range due to the small number of businesses reporting non-zero responses to this question. Survey respondents reported no legal services of dollar value provided in 2008 to international border businesses or to Canadian-owned businesses in St. Clair County. Canadian-owned businesses outside the county, however, were provided legal services worth $6,000 in 2008.

	Number of Filings Handled in St. Clair in 2008
All Corporate Incorporations	18+
New Canadian-Owned Business Incorporations	3+
Canadian-Owned Businesses Owner Transfers	“Few”

Respondent legal firms reported handling at least 18 corporate incorporations in 2008. (One firm could not specify the number, introducing uncertainty into this and the following questions regarding filings.) At least three Canadian-owned business incorporations were handled by respondents in 2008 as well as a "few" Canadian-owned business transfers.

The above results are based on 11 responses received from a population of 82 firms. However, the telephone follow-up revealed 18 businesses that either did not belong on the list or that had wrong or disconnected telephone numbers. Therefore, the adjusted population was 64, giving a response rate from this group of 17%. One of these responses, nevertheless, did not contribute materially to the results above as the response merely state that they were no longer actively practicing law.[57] According to the sales volume estimated in the commercial contact list, the respondents accounted for about 20% of sales volume from this sector.

A7.3. Questionnaire

The questionnaire, below, was accompanied by the list of border-related businesses shown in section A15.

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place.

1. Aggregate estimated dollar value of legal services in St. Clair County provided to the following groups of businesses in 2008:

	Value of Services Provided in 2008
Public Border-Related Agencies (List A)	$
International Border Businesses (List B)	$
Canadian-Owned Businesses in St. Clair County (List C)	$
Canadian-Owned Businesses NOT in St. Clair County	$

2. Report the number of filings in St. Clair County handled by your firm in 2008 for each of the following:

	Number
All Corporate Incorporations	
New Canadian-Owned Business Incorporations	
Canadian-Owned Businesses Owner Transfers	

Contact Information: Name ________________________________

Title ___________________________________

Phone Number _________________________

A8. Insurance Survey

A8.1. Methodology

The insurance sector survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, follow-up phone calls were placed to each business in the sector that had not responded at that point.

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57 The exact quote was, "…no longer practicing law (since 1998)." To have a long-defunct business on a supposed current database reflects negatively on the quality of the contact lists.

A8.2. Results

	Value of Insurance Premiums Sold in St. Clair in 2008
Canadian Individuals	More than $ 200,000
Public Border-Related Agencies (List A)	$ 0
International Border Businesses (List B)	More than $ 7,500
Canadian-Owned Businesses in St. Clair County (List C)	More than $ 15,000
Canadian-Owned Businesses NOT in St. Clair County	More than $ 40,000

From the insurance firms responding to the survey, insurance premiums valued at close to $300,000 were sold in St. Clair County in 2008 to individuals or businesses whose purchase of the premium could be impacted by the border crossing. More than two-thirds of the value of these premiums was sold to Canadians in 2008. Insurance companies responding to the survey reported no premiums of value sold to public border-related agencies in 2008. International border businesses, such as importers and transportation firms whose activities depend heavily on the border crossing, purchased at least $7,500 in insurance premiums in 2008. More than $15,000 worth of insurance premiums were purchased by Canadian-owned businesses in St. Clair County in 2008 while Canadian-owned businesses outside of St. Clair County bought more than $40,000 worth of insurance premiums.

Please note that the results for the insurance survey are reported in ranges for confidentiality purposes, because each question category either had (1) a small number of non-zero responses or (2) a sufficient number of non-zero responses, but one firm's response accounted for too high a percentage of the sum.

The value of insurance premiums paid by Canadian individuals for non-commercial real estate in St. Clair County in 2008 was given a dollar estimate by only one company and the estimate was less than $1,000. Another respondent, however, indicated that the question was impossible or impractical to answer.

The above results are based on 25 completed responses from a population of 122 firms. Twenty-three businesses in the contact list, however, had disconnected or wrong telephone numbers and nine businesses were identified as being out of business or belonging to a different sector. Therefore, 25 responses from an adjusted population of 90 gives a cooperation rate of 28%. The sample of respondent businesses included the two largest insurers in the sector, according to the number of employees estimated in the commercially provided contact lists.

A8.3. Questionnaire

The questionnaire, below, was accompanied by the list of border-related businesses shown in section A15.

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place.

1. Aggregate estimated dollar value of insurance premiums sold within St. Clair County to the following groups in 2008:

	Value of Premiums Sold in 2008
Canadian Individuals	$
Public Border-Related Agencies (List A)	$
International Border Businesses (List B)	$
Canadian-Owned Businesses in St. Clair County (List C)	$
Canadian-Owned Businesses NOT in St. Clair County	$

2. Estimate the value of insurance premiums paid by Canadian individuals for non-commercial real estate in St. Clair County in 2008: $____________________[58]

3. Contact Information: Name ______________________________
   Title ________________________________
   Organization __________________________
   Phone Number _________________________

A9. Temporary Agencies Survey

A9.1. Methodology

Because of the small number of firms in this sector, this survey was conducted by initiating contact with potential respondents by telephone and then sending and receiving the survey back through e-mail.

A9.2. Results

Value of Temporary Help Services Provided to the Following Groups in 2008	
Public Border-Related Agencies (List A)	$0
International Border Businesses (List B)	$0
Canadian-Owned Businesses in St. Clair County (List C)	$15,000 - $20,000
Canadian-Owned Businesses NOT in St. Clair County	$0

Temporary help firms reported services valued between $15,000 and $20,000 provided in 2008 to Canadian-owned businesses in St. Clair County. No temporary help services were reported as being provided to public border-related agencies, international border businesses, or Canadian-owned businesses not located in St. Clair County.

Four businesses were identified in this sector for the survey. One of these had incorrect contact info and all attempts to contact failed. Of the three remaining, two participated in the survey.

A9.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place. See the enclosed sheet for the lists of Border-Dependent Businesses.

1. Aggregate estimated dollar value of temporary help services provided in St. Clair County to the following groups in 2008:

[58] While the context of the question implies it is querying for the value of premiums sold by the company being surveyed, one respondent thought it was asking for an estimate of premiums sold by all companies in the county. Thus, in replications the wording should be clarified.

	Value of Services in 2008
Public Border-Related Agencies (List A)	$
International Border Businesses (List B)	$
Canadian-Owned Businesses in St. Clair County (List C)	$
Canadian-Owned Businesses NOT in St. Clair County	$

2. Contact Information: Name ______________________________
   Title ________________________________
   Phone Number _______________________

A10. Media Survey

A10.1. Methodology

The media sector survey was first sent to potential respondents through the mail. To further boost the response rate, follow-up phone calls were placed to each business in the sector that had not responded.

A10.2. Results

Advertising Receipts and Sponsorship Received in 2008	
Public Border-Related Agencies (List A)	$0
International Border Businesses (List B)	$0
Canadian-Owned Businesses in St. Clair County (List C)	$1,000+
Canadian-Owned Businesses NOT in St. Clair County or Canadian Individuals	$78,175

The media sector reported no advertising or sponsorship dollars received in 2008 from either public border-related agencies or international border businesses. Canadian-owned businesses in St. Clair County spent more than $1,000[59] in media advertising and sponsorships in 2008. In addition, Canadian-owned businesses not located in St. Clair spent $78,175 in advertising and sponsorships in 2008.

Of 12 firms identified for possible inclusion in this population, three had disconnected phone numbers and addresses to which mail was undeliverable. Of the remaining nine, four responses were received for a 44% response rate. According to the sales volume estimated in the commercial contact list, the respondents accounted for about 97% of sales volume of the nine firms—though one of the non-respondent firms had no sales estimate.

[59] A range is given due to the small number of non-zero responses in this category.

A10.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place. See the enclosed sheet for the lists of Border-Dependent Businesses.

1. Aggregate estimated dollar value of advertising receipts and sponsorship your organization received from the following groups in 2008:

	Dollar Value in 2008
Public Border-Related Agencies (List A)	$
International Border Businesses (List B)	$
Canadian-Owned Businesses in St. Clair County (List C)	$
Canadian-Owned Businesses NOT in St. Clair County or Canadian Individuals	$

2. Contact Information: Name ______________________________
Title ________________________________
Organization _________________________
Phone Number _______________________

A11. Education Survey

A11.1. Methodology

The two primary post-secondary education institutions in the county were contacted via telephone for this survey and both responded.

A11.2. Results

	2008-09 Academic Year[60]	2006-07 Academic Year
Total Number of Students	10,735	10,073
Total Number of Canadian Students	75	72
Tuition Paid by Canadian Students	$ 536,274	$ 391,778

The number of Canadian students accounted for less than 1% of all post-secondary students during the two academic years for which data were collected. The post-secondary schools in St. Clair County had 10,735 students in the 2008-09 academic year. Of these, approximately 75 (about 0.7%) were Canadian. This was about the same ratio as recorded two years earlier. In the 2006-07 academic year, total enrollment was 10,073 with approximately 72 (0.7%) being Canadian.

[60] This would typically be summer 2008 through spring 2009.

Tuition paid by Canadian students, however, increased more dramatically than the increase in number of students. Tuition from Canadian students was estimated at $536,274 in the 2008-09 academic year, 37% higher than the $391,778 in the 2006-07 academic year. The average tuition per Canadian student was $7,150 per year in the 2008-09 academic year, compared with $5,441 per year in the 2006-07 academic year.

A12. Commercial Real Estate Survey

A12.1. Methodology

The commercial real estate survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, multiple follow-up phone calls were placed to each business in the sector that had not responded at that point.

A12.2. Results

Five commercial landlords responded to the survey. Four of the landlords stated they rented no office or manufacturing property to Canadians or Canadian businesses in 2008. The other respondent stated they were not able to determine that information.

From an original population of 22 commercial landlords, five responses were obtained. Six phone numbers were either disconnected or wrong numbers, one business indicated it was not in commercial real estate, and one contacted individual was no longer in business. From an adjusted population of 14, therefore, the response rate was 36%.

A12.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are “zero,” please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an ‘X’ in that place.

1. Estimate aggregate averages of commercial property square feet and value rented by Canadians (individuals and businesses) from your organization in St. Clair County during 2008:

	Square Feet - 2008	Rental Value - 2008
Office		$
Manufacturing and Warehouse		$

2. Contact Information: Name ______________________________
Title ________________________________
Organization _________________________
Phone Number _______________________

A13. Marinas Survey

A13.1. Methodology

The marina survey was first sent to potential respondents through the mail. Postcard reminders were sent to those who did not respond initially. To further boost the response rate, multiple follow-up phone calls were placed to each business in the sector that had not responded at that point.

A13.2. Results

Annual Gross Sales to Canadian Customers	2007	2008
Range	$1,150 to $8,250+	$690 to $7,790+
Mid-Point Estimate	$4,700	$4,240

The marinas surveyed reported sales to Canadian individuals or businesses in 2007 and 2008. Some were only able to report sales as a range, and one firm said it had no way of calculating. Therefore, the results reported above are in ranges with an unknown upper limit. To take a conservative approach, the upper-limit potential is assumed to be small and ignored with a mid-point of the ranges taken as estimates. Therefore, it is estimated that approximately $4,700 in marina sales in 2007 were to Canadian customers with the figure about $4,240 for 2008.

In 2007, no slips were reported as being leased to Canadian customers. However, in 2008, over 40 slips were leased to Canadian customers over the course of more than 20 nights. The exact numbers are not released here since only one respondent reported non-zero results for slip leasing to Canadians.[61]

Twenty-five firms were identified for this survey. Two of these were found to belong to a different business sector and seven others had wrong or disconnected phone numbers. Of the remaining 16 firms, eight responses were gathered for a 50% response rate. According to the sales volume estimated in the commercial contact list, the respondents accounted for about 62% of sales volume of the 16 firms—though one of the non-respondent firms had no sales estimate.

A13.3. Questionnaire

Directions: Answer all questions to the best of your ability. Even if all of your answers are "zero," please return the survey as this information is important to us. If a question is impossible or impractical to answer, please place an 'X' in that place.

1. Estimate your organization's annual gross sales to Canadian individuals and businesses in 2007 and 2008:

	2007	2008
Annual Gross Sales to Canadian Customers	$	$

2. Estimate the number of slips your organization leased to Canadian individuals and businesses in 2007 and 2008:

	2007	2008
Number of Slips Leased to Canadian Customers		
Total Number of Nights Slips Were Leased to Canadian Customers[62]		

[61] One other respondent, however, reported that they had no way of calculating this data.

3. Contact Information: Name ______________________________
Title ________________________________
Phone Number _______________________

A14. Canadian Visitor Survey

A14.1. Methodology

Intercept interviews were conducted in St. Clair County from Thursday, July 23, through Saturday, July 25. Locations chosen for the interviews were based on (1) likely locations for finding Canadians and (2) establishments that would allow surveying to take place. Since, many Canadians come to the region to shop, dine, and buy gas, these locations were targeted. Since most big box retailers have corporate policies prohibiting surveying, the bulk of surveying was conducted at gas stations near the bridge and the duty-free store with some dining and other intercepts included in the mix. Only Canadians age 18 years or older were interviewed.

Two hundred eight surveys were collected and eight were removed as outliers or due to inconsistencies. The usable sample size of 200 completions is associated with a sampling error of ±6.9% with 95% confidence. However, in addition to sampling error, results can be affected by non-sampling errors; and in this type of survey, the non-sampling coverage errors are especially important. Capturing a well-balanced sample of visitors in a region is exceedingly difficult since it requires (1) knowing in advance the exact distribution of visitors by location, (2) having access to those locations, and (3) having high enough volume at each location to make surveying practical; or, it requires catching all visitors as they come into a region—which is typically impractical. Fortuitously for this project, the Michigan Department of Transportation (MDOT) conducted an intercept survey on the Blue Water Bridge in June 2009, which, for Canadians, captures the vast majority of visits into the county. The results of the MDOT project offer an excellent baseline against which to check the results from this survey. In so much as the sample is representative of the population, results presented below that are comparative of subgroups and are statistically significant with 95% or higher confidence will be marked with an asterisk.

Day of Interview	
Thursday, July 23	25%
Friday, July 24	40%
Saturday, July 25	36%
Total	100%
	n=200

Time of Interview	
12-5 PM	63%
After 5 PM	37%
Grand Total	100%
	n=200

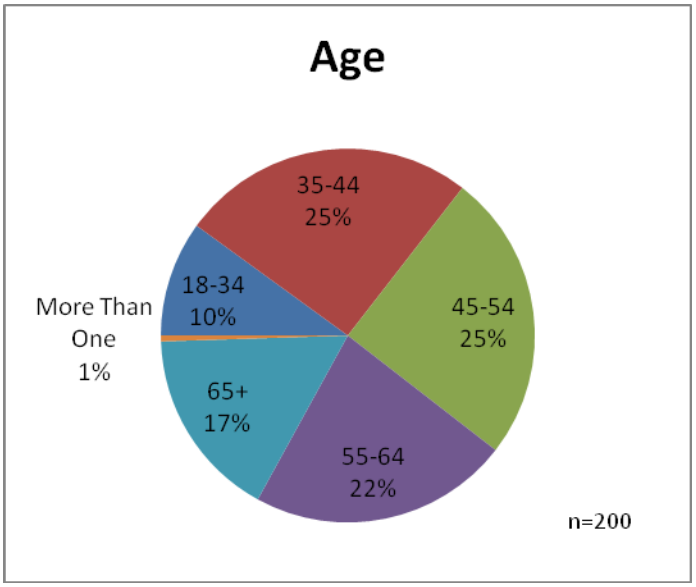
The surveying was spread across three days with 25% collected Thursday, July 23; 40% on Friday the 24th; and 36% of Saturday the 25th. Most of the surveying (63%) was done in the afternoon with the remaining intercepts collected during the evening (after 5 p.m.).

[62] If two slips were leased the same night to Canadian customers, that would count as two towards this sum.

Place of Interview	
Speedway	31%
Shell	28%
Duty-Free Store	23%
BP	8%
Tim Hortons	4%
Golden Corral	3%
TJ Maxx	3%
Citgo	3%
Total	100%
	n=200
Figures may not sum due to rounding.	

About two-thirds of the survey responses (68%) were collected at gas stations near the Blue Water Bridge. Of the remaining responses, 23% were collected at the duty free store and 10% were collected at other dining and retail locations.

A14.2. Demographics

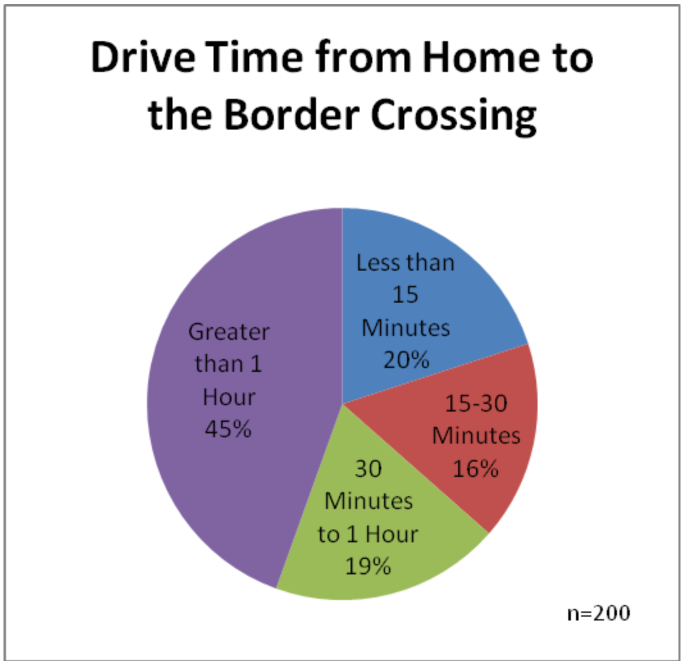


By age of respondent, the sample consisted of approximately half (50%) of respondents being in the 35 to 54 years old cohort. About 39% were 55 or older (including 17% who were 65 and older) and 10% were 34 or younger.[63]

[63] One response, noted as "More Than One" in the pie chart, had two ages listed, presumably the ages of a couple jointly responding to the survey. (Intercept methodology allowed only one response per traveling party.)

Place of Residence	% of Sample	% of Repeat Visits per Year
Sarnia	35%	60%
Elsewhere in Lambton County	4%	6%
Wallaceburg	3%	4%
London	16%	6%
Toronto	4%	2%
Elsewhere in Ontario	38%	22%
Other	2%	0%
Grand Total	100%	100%
	n=200	n=6,536
Figures may not sum due to rounding.		

Most all of the Canadian visitors were from the province of Ontario. More than a third of the sample respondents (35%) were from Sarnia with an additional 4% being from somewhere else in Lambton County. London accounted for 16% of respondents and Toronto for 4%.

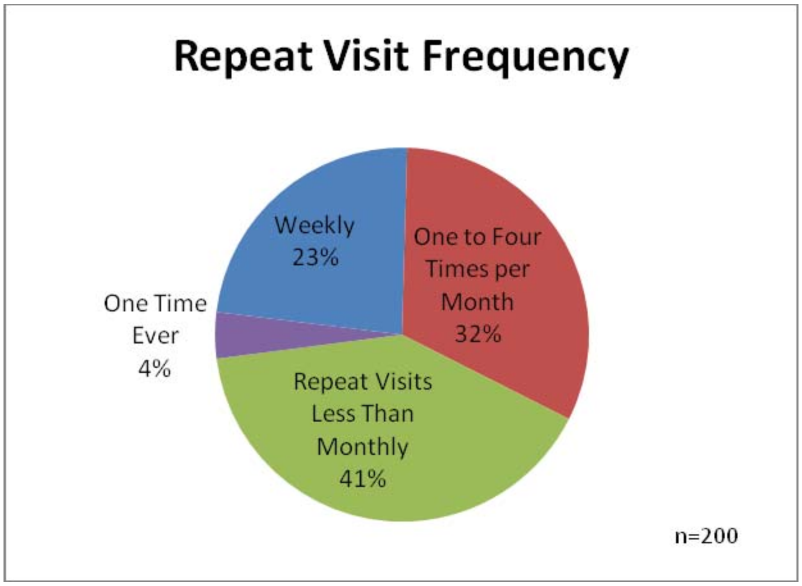


Sample distribution according to drive time from the border indicates that 36% of the sample lived within a half hour of the border crossing. Those living more than an hour away accounted for 45% of the sample.

Gender	
Female	37%
Male	61%
Not Recorded	2%
Total	100%
	n=200

The respondent sample contained a larger percentage of males than females (61% to 37%). This disparity was especially pronounced at the Speedway location (48 males to 13 females). Also, while responses collected in the evening were fairly even by gender, afternoon responses were tilted toward males (85 males to 43 females).

A14.3. Visiting Patterns

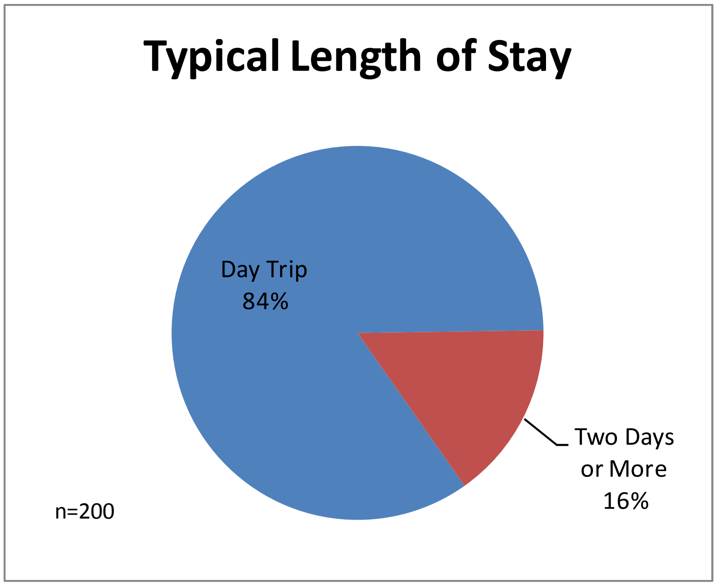


The vast majority of the sample (96%) stated that they visit St. Clair County at least once per year. Slightly less than a quarter of the respondents (23%) reported visiting weekly while close to a third (32%) said they visited from one to four times per month. Four percent of the sample said they do not make repeat visits to the area, representing first-time and one-time-only visitors.

Unsurprisingly, those who live closer to the border are more likely to make frequent trips into St. Clair County. Forty-four percent of respondents who live in Sarnia or elsewhere in Lambton County reported weekly trips into St. Clair County, more* than the 11% of Canadians living elsewhere reporting weekly trips.

Frequency of Visits	
Once per Day	4
Once per Week	22
Twice per Week	14
Three Times per Week	3
Four Times per Week	1
Once per Month	32
Twice per Month	21
Three Times per Month	5
Four to Six Times per Month	3
Twenty Times per Month	1
Once per Three Weeks	1
Once per Year	26
Twice per Year	19
Three Times per Year	11
Four Times per Year	15
Five to Ten Times per Year	10
Eleven to Twenty Times per Year	4
Once Ever	8
Total	200

A more detailed breakout of frequency of visits is shown above. In all, the 200 respondents account for 6,536 visits per year. The (median) average Canadian visitor makes 12 visits per year to St. Clair County.[64]



A large majority of visitors (84%) reported that their typical visits to St. Clair County are day trips. Of the 31 respondents reporting typically spending longer than one day, 14 reported usually spending two days while 13 said they usually spend three to four days. In total, the average respondent reported spending 1.3 days per visit.

Visitors who traveled farther were more likely* to stay longer. Of those respondents who live at least an hour from the border crossing, 27% reported typically staying for two days or more. Of respondents living within an hour of the border crossing, just 6% typically stay for two or more days.

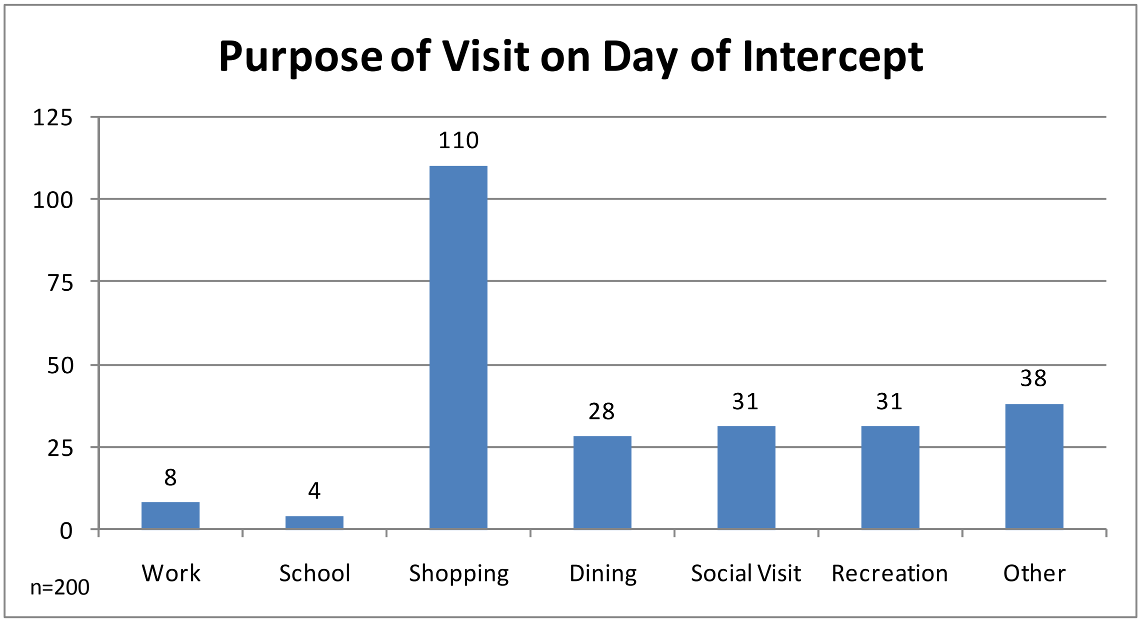
Typical Size of Traveling Party	
1	15%
2	58%
3	11%
4	12%
Up to 6	5%
Total	100%
	n=200
Figures may not sum due to rounding.	

More than half of the respondents (58%) were in a traveling party of two people. Only 15% of respondents were traveling alone. The remaining 28% of respondents were in groups of three to six.

- Respondents traveling alone were much more likely* (90%) to visit St. Clair monthly or more often than respondents traveling in a group (49%).

[64] The mean number of visits per year is 32.7.

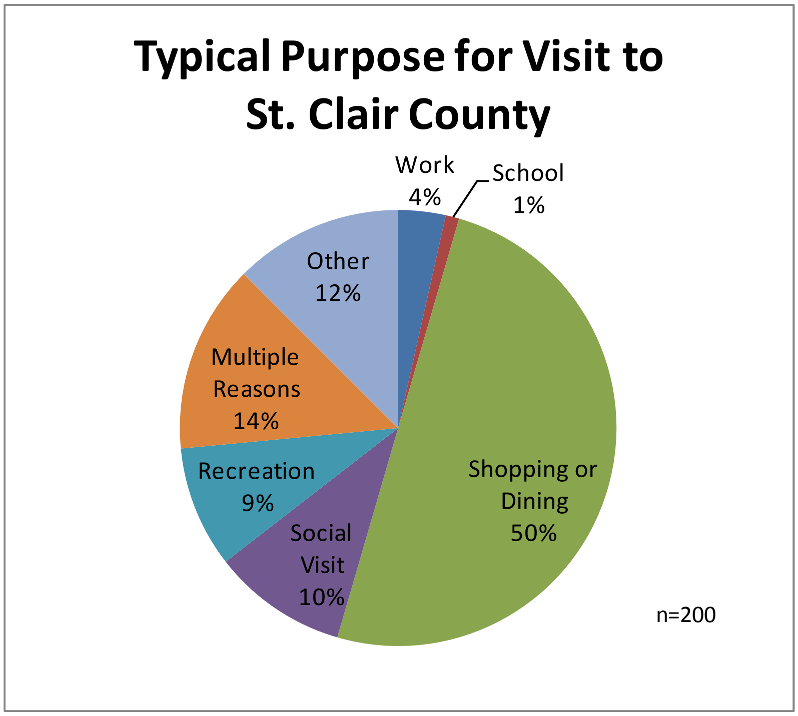
- Respondents age 54 and younger were more likely* (23%) to be traveling alone than respondents 55 and older (2%).



Respondents were asked their purpose was for traveling to St. Clair County on the day of the interview. They were allowed to give more than one purpose, so the tally in the chart above is more than the number of respondents (200). Over half (55%) of the respondents stated they were visiting the county for shopping. About 16% cited visiting for a social visit and the same percentage said their visit was for recreation purposes. Dining was the purpose of visit for 14% of respondents. Of the 31 respondents who cited an “other” reason, close to half (15) said they were passing through.

Just 4% said they were visiting for work, significantly lower than the approximately 18% the MDOT study found of vehicle traffic with Canadian license plates crossing the Blue Water Bridge for work. This skew is not surprising since visitors who are in the county to work are less likely to be found at gas stations, restaurants, and other retail establishments than those coming specifically to shop or for other reasons.

The MDOT study accepted only one purpose for visiting compared with this study, which accepted more than one. Nevertheless, the percentages of visitors who visit St. Clair County to shop are similar. About 52% of vehicles with Canadian license plates making bridge-crossing trips that were ending or starting in St. Clair County had the purpose of shopping in St. Clair County according to the MDOT survey.



Seventeen percent of visitors said that the reason they were visiting on the day of the interview was not the typical reason they visit the county. These respondents were then asked for their typical purpose of travel. Overall, among the 200 respondents, exactly half (50%) said they typically visit for shopping or dining (only).[65] The next-largest single reasons cited were for a social visit (10%) and recreation (9%). Fourteen percent cited multiple reasons. Overall, 4% cited work as the sole reason for their visit while 5% reported work as at least part of the purpose for their visit.

- Those respondents who stated they were in the county to shop or dine were more likely* (63%) to live within an hour of the border than to live farther away (34%).
- Females were more likely* (64%) to say they were visiting the region to shop or dine than males (43%).
- Respondents who typically visit to shop or dine were more likely* (68%) to say they visit St. Clair County monthly or more frequently than those who do not typically visit just to shop and dine (43%).
- Respondents intercepted at the duty-free store were less likely* (33%) to be visiting the county solely to shop or dine compared with those intercepted elsewhere (55%).

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[65] Here, the group “shopping and dining” includes those who said they typically visit St. Clair County only for shopping, only for dining, or only for shopping and dining.

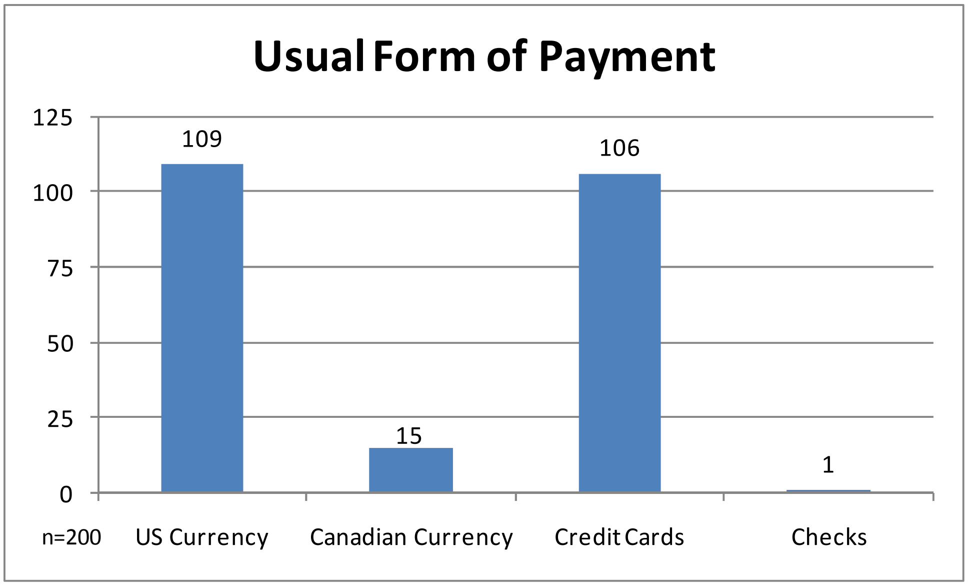
A14.4. Spending Patterns

Average Spending in St. Clair County	Per Person Per Day
Apparel	$26.88
Food	$20.25
Gas	$17.50
Liquor/Tobacco	$5.18
Entertainment/Recreation	$3.53
Lodging	$2.91
Services/Repairs	$0.43
Other	$0.35
Total	$77.03
	n=200

Per the survey results, the average Canadian visitor spent $77.03 per day while in St. Clair County. The largest portions of spending were for apparel ($26.88), food ($20.25), and gas ($17.50). Other spending went toward liquor and tobacco ($5.18), entertainment and recreation ($3.53), and lodging ($2.91)—with relatively small amounts for services, repairs, or other expenses. Variations in spending patterns included the following:

- Those who visit only for shopping and dining purposes spent more* per person per day ($90.38) than all other visitors ($63.68).
- Intercepts conducted at the duty-free store yielded a lower* average spending per person per day than at intercepts conducted elsewhere; however, as stated earlier, respondents at the duty-free store were less likely to be in the area only to shop and dine, and when this purpose was accounted for, a difference in spending pattern between duty-free store intercepts and those at other locations no longer held up.[66] Regardless, survey participants at the duty-free store spent more* on liquor and tobacco—a result independent of purpose of visit--$14.67 per person per day, compared with $2.42 for other respondents.
- Given the data from this survey, it could not be established that Canadian visitors to the county whose purpose was work spent a materially different amount per person per day than other visitors.[67]
- Females in the sample reported slightly higher spending per person per day ($83.23) than males ($74.95), but the difference was not statistically significant.
- Though multi-person traveling parties spent more* per day ($171.20) compared with individual travelers ($114.74), individual travelers spent more* per person per day ($114.74) than people traveling together ($70.38).

[66] The converse of this did not hold true. That is, for visitors whose purpose was only to shop or dine, when duty free intercept locations were excluded, the respondents with purpose only to shop or dine still spent more* per person per day than visitors with other purposes.
[67] The work sample was small, making this analysis difficult. Furthermore, even though non-work visitors spent more on food and apparel, work visitors in the sample spent more on gas, perhaps because this group included trade or transportation workers with large vehicles.



More than half of the respondents (53%) cited credit cards as their usual form of payment. Over half (55%) said their usual form of payment was in U.S. currency while 8% reported Canadian currency as their typical payment form. Some respondents reported more than one usual payment form; 15%, for example said both U.S. currency and credit cards were their usual payment form.

A14.5. Questionnaire

1. Are you a Canadian resident?
   01 Yes
   02 No → THANK AND TERMINATE

2. We are not supposed to interview anyone under 18; are you 18 or over?
   01 Yes
   02 No → THANK AND TERMINATE

   ----

3. Approximately how often do you visit the Port Huron/St. Clair County area?

   _________ times per ___________ …OR… _________ times ever

   [EXAMPLES: 5 TIMES PER WEEK; 2 TIMES PER MONTH; 2 TIMES EVER]

4. What is the primary purpose of your visit today?
   01 Work
   02 School
   03 Shopping
   04 Dining out
   05 Social visit
   06 Recreation
   07 Other: ____________________________________
   99 Don't Know/Refused

5. Is the purpose today the reason you typically visit the Port Huron/St. Clair County area? [DON'T ASK IF THIS IS THEIR FIRST VISIT TO THE AREA]
   01 Yes → SKIP TO #7

02 No
99 Don’t Know/Refused

6. What is the typical primary purpose of your visits to the area? [ALLOW MORE THAN ONE ANSWER]
   01 Work
   02 School
   03 Shopping
   04 Dining out
   05 Social visit
   06 Recreation
   07 Other: ____________________________________
   99 Don’t Know/Refused

7. What is your usual length of stay when you visit the area?
   01 Same day trip
   02 _________ days
   99 Don’t Know/Refused

8. What is the usual size of your traveling party[68] when you visit the area? (Including yourself, how many total people are usually on the trip?)
   ____
   99 Don’t Know/Refused

9. When you visit the area, approximately how much do you spend in each of the following categories?[69] [ASSUMING US DOLLARS; IF CANADIAN DOLLARS, ADD A ‘C’ AFTER THE AMOUNT]
   a) Food
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   b) Gasoline or other fuel
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   c) Apparel
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   d) Lodging
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   e) Entertainment/Recreation
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   f) Liquor/Tobacco
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   g) Services/Repairs
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________
   h) Other
   $___________ per… 01 Visit / 02 Week / 03 Month / 04 Year / 05 Other: _____________

10. What is your usual form of payment? [READ ANSWERS]
   01 US Currency
   02 Canadian Currency
   03 Credit Cards
   04 Checks
   05 Other: ________________________
   99 Don’t Know/Refused

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[68] The ‘traveling party’ is the group with whom the interviewee is sharing expenses.
[69] This question should be answered in terms of the entire traveling party.

11. What is your place of residence? [READ ANSWERS]
    01 Sarnia
    02 Elsewhere in Lambton County
    03 Wallaceburg
    04 Elsewhere in Ontario
    05 Other: _________________
    99 Don't Know/Refused

12. What is the drive time from your home to the border crossing you use most frequently to enter St. Clair County?
    01 Less than 15 minutes
    02 15 to 30 minutes
    03 30 minutes to 1 hour
    04 Greater than 1 hour
    99 Don't Know/Refused

13. Which category does your age fall into?
    01 18-24
    02 25-34
    03 35-44
    04 45-54
    05 55-64
    06 65-
    99 Don't Know/Refused

----------------[DO NOT ASK: RECORD ONLY]--

14. Gender
    01 Female
    02 Male

15. Place of interview: _______________________________

16. Time of interview:
    01 AM
    02 12-5 PM
    03 After 5 PM

17. Month and day of interview:
    01 June
    02 July
    Day: _______________________

18. Interviewer initials: ____________________

A15. Border-Related Businesses

List A: Public Border-Related Agencies

1. Bureau Of Customs & Border Protection	202 Fruit St	Algonac
(Port of Entry-Port Huron)	526 Water St Rm 301	Port Huron
	451 S WATER ST	MARINE CITY
(Blue Water Bridge Office)	4984 STATE RD	FORT GRATIOT
(Border Patrol)	2112 RIVER RD	MARYSVILLE
2. Citizenship & Immigration Services	1410 Elmwood St	Port Huron
3. National Railroad Passenger	2223 16th St	Port Huron
4. State Of Michigan Department of Transportation	2127 11th Ave	Port Huron

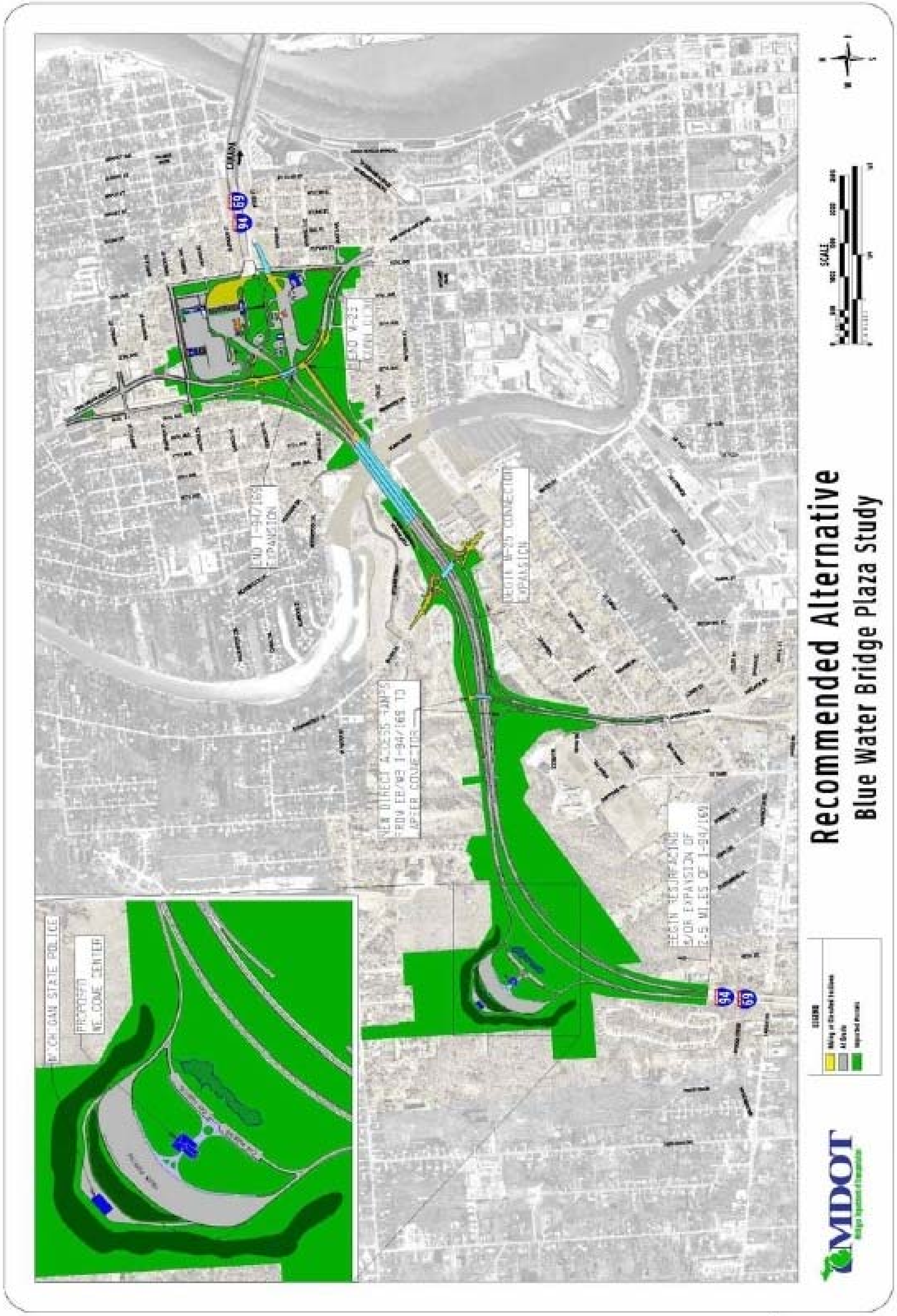
List B: International Border Businesses

1. A N Deringer	PO Box 610252	Port Huron
2. Air Express International USA	2660 20th St	Port Huron
3. Ameri-Can Customhouse Brokers	2321 Pine Grove Ave 102b	Port Huron
4. BCB International	2321 Pike Grv Ste 2118	Port Huron
5. Border Services	2412 10th Ave	Port Huron
6. Buckland Global Trade Services	2321 Pine Grove Ave	Port Huron
7. Can Am Importers	320 Woodward Ave Kenmore	Marysville
8. Cataract Customhouse Brokerage	2321 Pngrove Ave Ste 2113	Port Huron
9. Charles White	1129 12th Ave	Port Huron
10. CIRCLE INTERNATIONAL	2321 PINE GROVE AVE 210	PORT HURON
11. Cotrac	2202 S Range Rd	Saint Clair
12. DHL GLOBAL FORWARDING	2321 PINE GROVE AVE	PORT HURON
13. Elexco Land Services	PO Box 313	Marysville
14. Elite Transportation	624 Grand River Ave	Port Huron
15. EXPEDITORS INTERNATIONAL	P O BOX 810	PORT HURON
16. Fast Freight Express	6770 Ravenswood Rd	Smiths Creek
17. Fedex Trade Networks Transport	151 Gaffield Dr	Smiths Creek
	2321 Pine Grove Ave	Port Huron
18. Flex Logistics	PO Box 611748	Port Huron
19. Freight Baur Baur	1575 Michigan Rd	Port Huron
20. Great Lakes ATV	9156 Division Rd	Columbus
21. Great Lakes Customs Brokerage	2321 Pine Grove Ave	Port Huron
22. JR Leasing	4743 Gratiot Ave	Saint Clair
23. Norman G Jensen	1915 Dove St	Port Huron
	2321 Pine Grove Ave	Port Huron
24. PBB Global Logistics	2321 Pine Grove Ave	Port Huron
25. Plaza Importers	3760 Griswold Rd	Port Huron
26. R I Transit	6111 Swartout Rd	Algonac
27. Trans American Customhouse	2321 Pine Grove Ave # 1113	Port Huron
28. U P S Supply Chain Solutions	1824 Pine Grove Ave	Port Huron
29. Worldwide Import Export	1015 Lapeer Ave	Port Huron
30. YRC Worldwide Technologies	2321 Pine Grove Ave	Port Huron

List C: Canadian-Owned Businesses

1. AFFILIATED CUSTOMS BROKERS USA	805 10TH AVE	PORT HURON
	2321 Pine Grove Ave # 2116	Port Huron
2. ANR PIPELINE COMPANY	4876 KETTLEHUT RD	CAPAC
3. BLUE WATER FERRY		MARINE CITY
4. CLAIR ST TOOL & DIE		MARINE CITY
5. CONTAINER DESIGN SERVICES	9023 MARINE CITY HWY A	FAIR HAVEN
6. DURA-CHROME		MARINE CITY
7. E B EDDY PAPER	1700 WASHINGTON AVE	PORT HURON
8. ELECTROZAD SUPPLY COMPANY	1915 DOVE ST	PORT HURON
9. EMCO LIMITED		MARINE CITY
10. FIVE STAR TOOL & DIE LIMITED		MARINE CITY
11. GMA COVER CORP.	2401 16TH ST	PORT HURON
	2440 20TH ST	PORT HURON
12. GRAND TRUNK WESTERN RAILROAD	2801 MINNIE ST	PORT HURON
13. GREAT LAKES INDUSTRIAL CONTROLS	3560 PINE GROVE AVE 352	PORT HURON
14. INTERTAPE POLYMER	317 KENDALL ST	MARYSVILLE
	4655 KETCHUM RD	SAINT CLAIR
15. JACK RUTHERFORD CUSTOM BROKERS	3605 32ND ST STE 6N	PORT HURON
16. LE MAITRE SPECIAL EFFECTS	1915 DOVE ST	PORT HURON
17. LIVINGSTON INTERNATIONAL	2321 PINE GROVE AVE # 112	PORT HURON
18. MYLAR TWO MOLD		MARINE CITY
19. ONTARIO DIE COMPANY OF AMERICA	2735 20TH ST	PORT HURON
20. OPPENHEIMER & CO.	810 MICHIGAN ST	PORT HURON
21. OWS RAIL CAR		PORT HURON
22. PREMIER SALONS INTERNATIONAL	BIRCHWOOD MALL	FORT GRATIOT
23. ROYSTER-CLARK	204 N MAIN ST	YALE
24. RUSSELL A. FARROW U.S.	2321 PINE GROVE AVE # 2112	PORT HURON
25. VANNATTER GROUP		MARINE CITY
26. WILLSON INTERNATIONAL	2321 PINE GROVE AVE # 2104	PORT HURON
27. WINSTON ROLAND	1979 HOLLAND AVE	PORT HURON
28. WORLD SOURCE FILTRATION	326 GRISWOLD ST	PORT HURON

Appendix B: Map of Blue Water Bridge Plaza Project



Appendix C: Impact Analysis Glossary

IMPLAN Professional—an economic impact assessment modeling system. It allows the user to build economic models to estimate the impacts of economic changes in states, counties, or communities. It was created in the 1970s by the Forestry Service and is widely used by economists to estimate the impact of specific events on the overall economy.

Input-Out Analysis—an examination of business-business and business-consumer economic relationships capturing all monetary transactions in a given period, allowing one to calculate the effects of a change in an economic activity on the entire economy (impact analysis).

Direct Impact—economic activity generated by a project or operation. For construction, this represents activity of the contractor; for operations, this represents activity by tenants of the property.

Overhead—construction inputs not provided by the contractor.

Indirect Impact—secondary economic activity that is generated by a project or operation. An example might be a new office building generating demand for parking garages.

Induced (Household) Impact—economic activity generated by household income resulting from direct and indirect impacts.

Ripple Effect—the sum of induced and indirect impacts. In some projects, it is more appropriate to report ripple effects than indirect and induced impacts separately.

Multiplier—the cumulative impacts of a unit change in economic activity on the entire economy.

Appendix D: Interchange Development Categories

Interstate Interchange Classifications		
Category	Development	Requirement
0	Minimum Forest Agriculture agriculture-residential	no requirements
1	Residential single family homes medium sized lots	traffic < 2,000 ATD not close to town rural setting
2A	Light Tourist Service 1+ gas station 1 small motel	traffic > 4,000 ATD water service moderate visibility within 10 miles of town
2B	Economically Competitive 2-4 gas stations 1-2 fast food restaurants 2+ hotels	traffic > 8,000 ATD water & sewer town < 3 mile more than 5 miles from next exit
2C	Economic Integration 4+ gas stations 3+ fast food restaurants 2+ full-service restaurants other business/malls	traffic > 12,000 ATD water and sewer town < 2 miles
3A	Heavy Tourist 6+ hotels 3+ full-service restaurants 3+ fast food restaurants 3+ gas stations	water and sewer 2-3 miles from intersecting interstate
3B	Truck Stop 3+ gas stations/truck stop 1-2 fast food restaurants no malls 1-2 hotels	3-5 miles from town 20+ miles from intersecting interstate traffic < 6,000 1-2 per 100 miles
Source: Hartgen, et al. "Growth at Rural Interchanges: What, Where, Why. Transportation Research and Record, 1359		