



2002-2012 Transportation & Trade Report

Alberta Transportation
June 2014

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Transportation plays an important role in Alberta's trade with other provinces and countries. Transportation systems are complex networks that are comprised of different transportation modes, each supported by very unique infrastructures. Smart, efficient, safe and sustainable planning is required to enable the seamless movement of goods which allow Alberta's communities to buy and sell goods in competitive world markets. It is important to remember that Alberta, as an inland province, is reliant on the transportation networks of neighbouring jurisdictions to get exports to international markets, as well as receive imports, and that Alberta's transportation infrastructure also plays the same role for others. This creates the need for collaborative efforts, research and innovation led by strong partnerships with all jurisdictions.

North American transportation deregulation and international trade liberalization have produced policies that encourage economic growth and global competition. This in turn has produced both quantitative and qualitative trends in the transportation industry. The first quantitative trend is reflected in the continuous growth of freight volumes and distances transported to market. The second attribute is broad qualitative changes in the nature and scope of services the distribution industry offers. The third trend is a shift in transportation and logistics needs as firms engage in more value-added production. Value-added manufacturing results in an increased demand for transportation by road as trucks move containers to and from intermodal rail facilities, air cargo terminals or directly to ports or markets.

In 2012, over 35% of Alberta's international merchandise exports¹ moved to market by road, rail, marine and air, with the balance moved by pipeline. Pipelines may be the dominant mode of transport for moving Alberta's exports, but air, rail and road transportation also play a key role in moving the province's value-added goods.

Imports¹ also play an important role in our provincial economy. Imports offer both industrial and retail consumers a broader range of products and bring an important source of price competition to local markets. In 2012, over 84% of Alberta's merchandise imports moved by road, rail, marine and air, with the balance moved by pipeline.²

The information in this report provides useful insights for developing transportation policies and programs that are necessary for a sustainable economy and increase the understanding of Alberta's trade patterns.

T Key trends in Alberta's transportation and trade patterns are summarized at the end of the report and are highlighted throughout the document. They can be identified by the icon to the left.

¹ Exports and imports refer to merchandise only in this report unless otherwise indicated.

² Import figures only account for goods that clear customs in a specific province. As such, this figure does not include imports that clear at ports of clearance in other provinces and then travel domestically to Alberta.

Import and export statistics contained in this report are international trade figures sourced from Statistics Canada's International Merchandise Trade database, unless otherwise indicated. All values refer to inflation adjusted values using Canadian dollars (2007), annual Paasche index for imports and exports, as published by Statistics Canada.³

For *exports*, information represents the mode of transport by which the *international* boundary is crossed. This may be different from the mode of transport within Canada.

For *imports*, it is the last mode of transport by which the cargo was transported to the port of clearance in Canada. This may not be the mode of transport by which the cargo crossed the Canadian border in cases of inland clearance. This may lead to some underestimation of Alberta imports.

Although every effort has been made to ensure the accuracy and reliability of the content and data, Alberta Transportation can accept no responsibility in this regard. This report includes error corrections confirmed with Statistics Canada. However, please note that the International Merchandise Trade data may vary compared to other official Statistics Canada publications or sources.

For further details on the information contained in this report, or reports from previous years, please contact:

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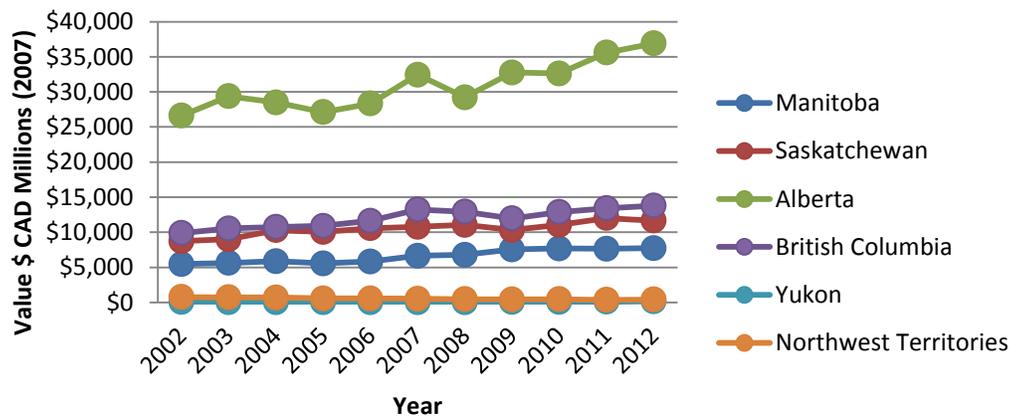
³ Source: Statistics Canada, CANSIM Table 228-0063

Alberta Trade Overview

Although this report will focus primarily on international imports and exports, large volumes of goods also move interprovincially and intraprovincially. From 2002 to 2012, Alberta maintained the highest value of interprovincial goods exports and imports in western Canada (Alberta, British Columbia, Saskatchewan, Manitoba, Yukon and Northwest Territories). During this time, Alberta's interprovincial goods exports increased by approximately 39% or \$10 billion and Alberta's interprovincial goods imports increased by 37% or \$6.8 billion.⁴

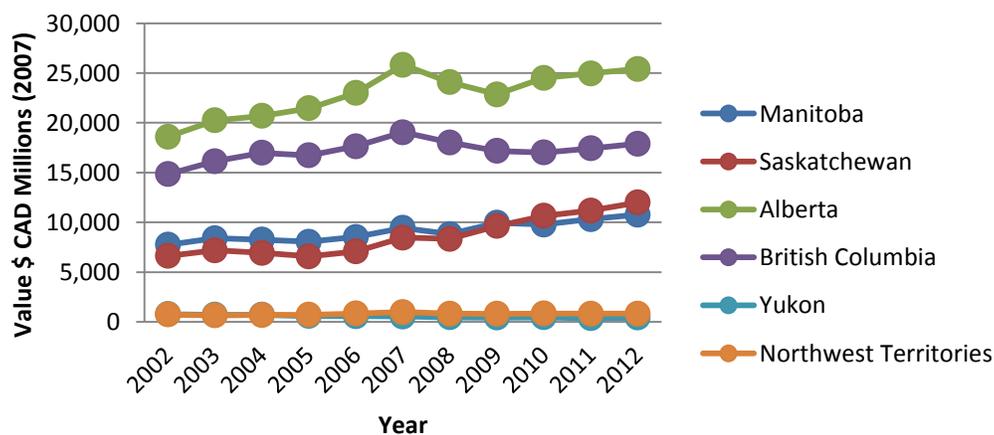
Interprovincial Exports

Interprovincial Exports, Provincial Comparison, by Province of Origin



Interprovincial Imports

Interprovincial Imports, Provincial Comparison, by Province of Destination

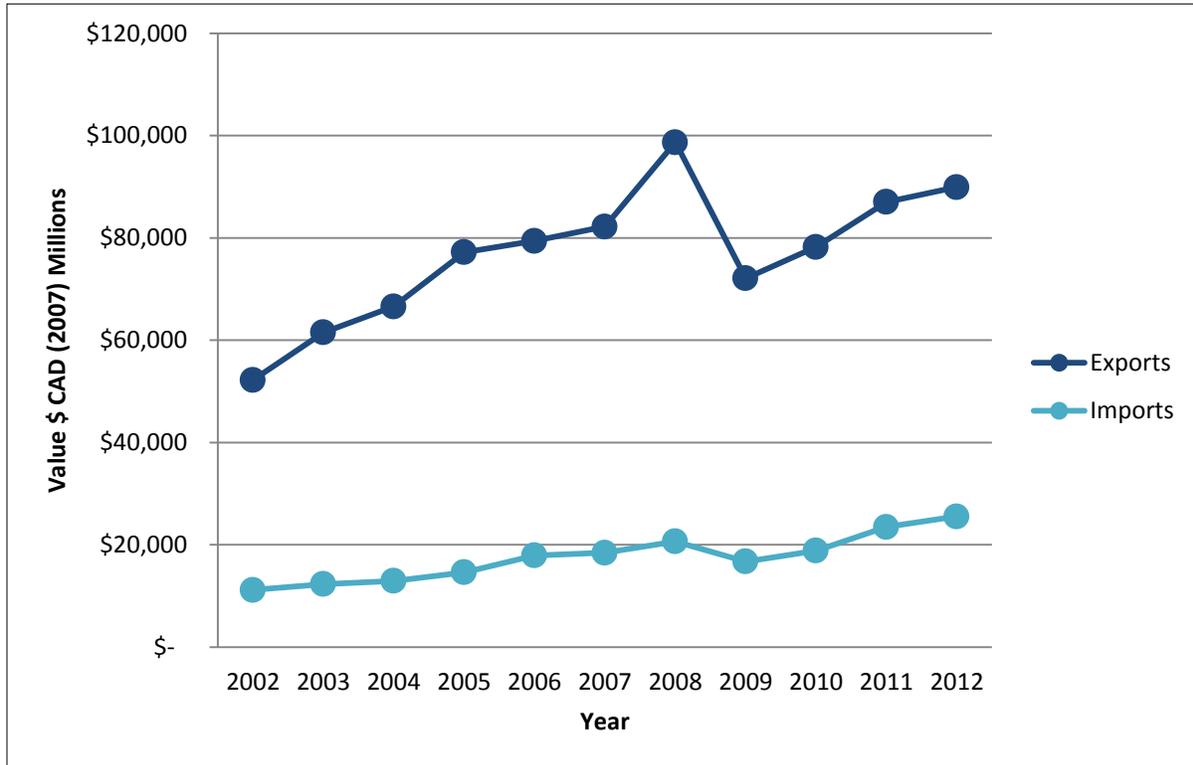


Source: Statistics Canada
CANSIM Table 384-0038

⁴ Note: Values are in 2007 constant Canadian dollars and represent interprovincial trade of goods.

International Trade

Alberta engages in trade with hundreds of foreign countries. From 2002 to 2012, Alberta's exports have grown from **\$52.21 billion** to **\$89.92 billion**, an increase of 72%. Similarly, Alberta imports have grown from **\$11.18 billion** to **\$25.54 billion**, an increase of 128% from 2002 to 2012.



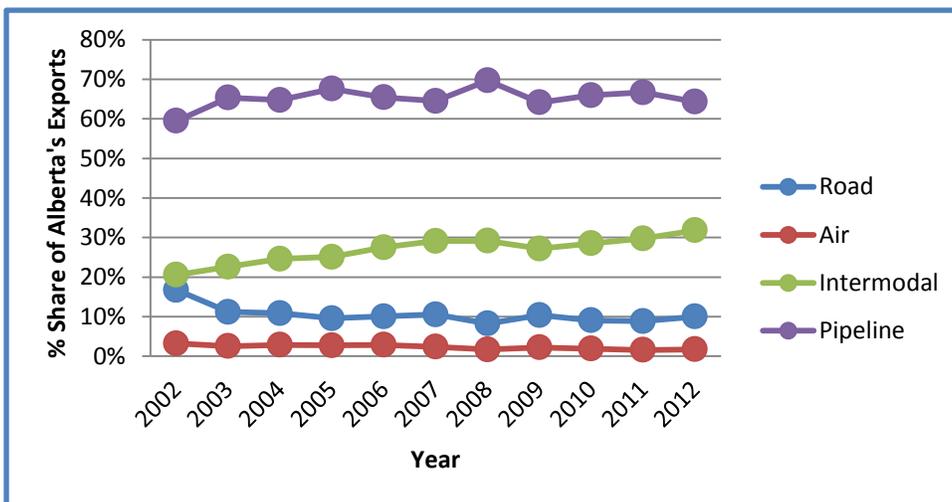
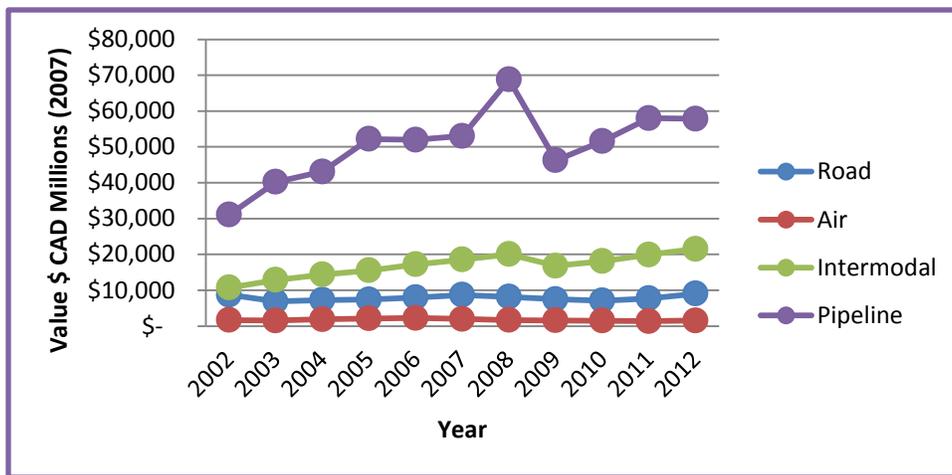
Exports by Mode

Of the billions worth of goods exported internationally from Alberta each year, the majority is shipped by pipeline. The remaining value of exports travelled to markets by rail, marine, road or air. Since Alberta is an inland province, large volumes of goods are moved to and from ports by rail or by a combination of different modes of transport, known as intermodal transportation. A container movement from Alberta to China that combines rail and marine transportation is a common example of intermodal transportation.

From 2002 to 2012, by value, Alberta’s exports by road and air have remained relatively constant, while exports by intermodal (rail and marine) and by pipeline have increased by 101% and 86% respectively.

The share (by percentage) of Alberta’s intermodal exports has increased by 14% from 2002 to 2012. Other modes of transport for Alberta’s exports have either declined slightly, in the case of road and air exports, or remained relatively steady, in the case of pipeline exports.

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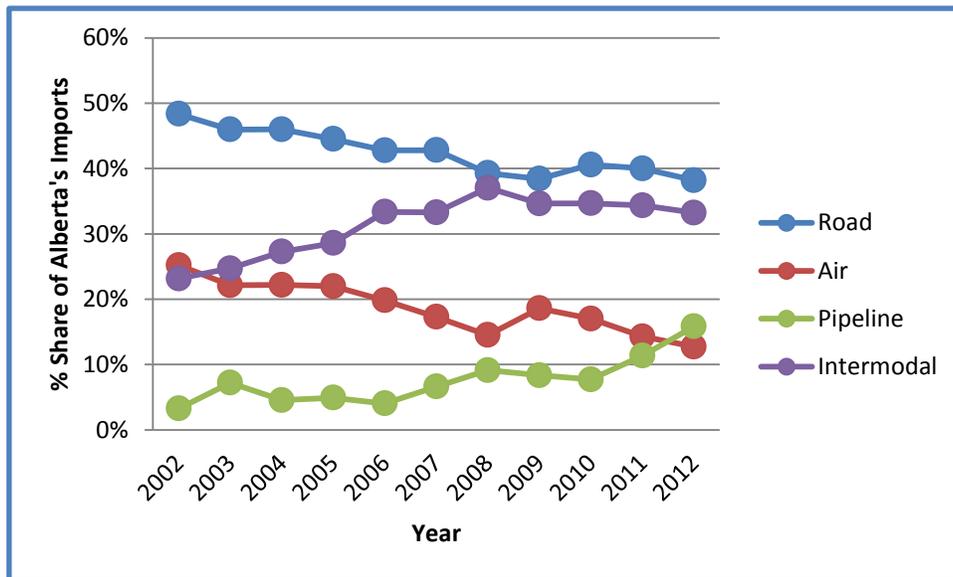
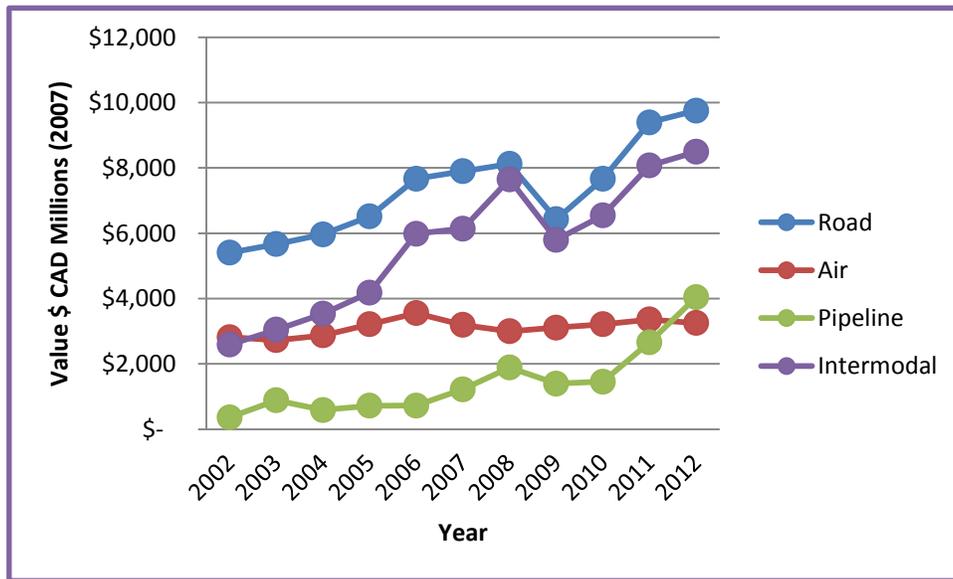
Note: For exports, mode of transport represents the mode by which the international boundary is crossed.

Imports by Mode

Road is the predominant mode of transport by which goods arrive to the port of clearance in Canada. By value, Alberta's imports by road, by intermodal (rail and marine) and by pipeline increased from 2002 to 2012, increasing 80%, 228% and over 1000%, respectively, while imports by air remained relatively constant. The gap in value between Alberta's imports by road and by intermodal has been narrowing during this period.

Over the same period, the share (by percentage) of Alberta's imports by road and by air declined 10% and 12% respectively, while the share of Alberta's imports by intermodal and by pipeline increased.

T



Note: For imports, mode of transport represents the last mode of transport by which the cargo arrived to the port of clearance in Canada. This may not be the mode of transport by which the cargo arrived at the Canadian port of entry in the case of inland clearance. This may lead to some underestimation of Alberta imports. This applies to all import figures in this report.

Trade with North America, Overview

Exports to North America, Value \$ CAD Millions (2007)

Year	Country	
	United States	Mexico
2012	\$77,326	\$927
2011	\$74,987	\$884
2010	\$67,331	\$750
2009	\$60,112	\$1,067
2008	\$86,021	\$990
2007	\$70,570	\$772
2006	\$69,227	\$634
2005	\$67,902	\$545
2004	\$53,453	\$673
2003	\$54,989	\$409
2002	\$45,776	\$458



- The United States remained the top destination for Alberta’s exports from 2002 to 2012. Mexico has continuously been ranked as the fourth or fifth largest destination for Alberta’s exports during this period, settling into fourth position in 2012.
- By value, Alberta’s exports to the United States increased over 70% from 2002 to 2012, which is an annual average increase of 6.5%.
- By value, Alberta’s exports to Mexico more than doubled from 2002 to 2012, with an annual average increase of 9.3%.

**Imports from North America,
Value \$ CAD Millions (2007)**

Year	Country	
	United States	Mexico
2012	\$16,750	\$1,435
2011	\$15,206	\$1,241
2010	\$12,408	\$950
2009	\$11,083	\$712
2008	\$14,357	\$794
2007	\$12,681	\$729
2006	\$12,254	\$706
2005	\$10,476	\$421
2004	\$9,114	\$511
2003	\$8,945	\$460
2002	\$8,104	\$430



- By value, the United States remained the top origin for Alberta imports from 2002 to 2012; Mexico was ranked as the second largest import origin for Alberta, from 2002 to 2004, until it was surpassed in 2005 by China. Since 2005, Mexico has remained the third largest import origin for Alberta.
- By value, Alberta’s imports from the United States have more than doubled from 2002 to 2012, with an average annual increase of 9.7%.
- By value, Alberta’s imports from Mexico have more than tripled from during this period, with an annual average increase of 21%.

Trade with the United States

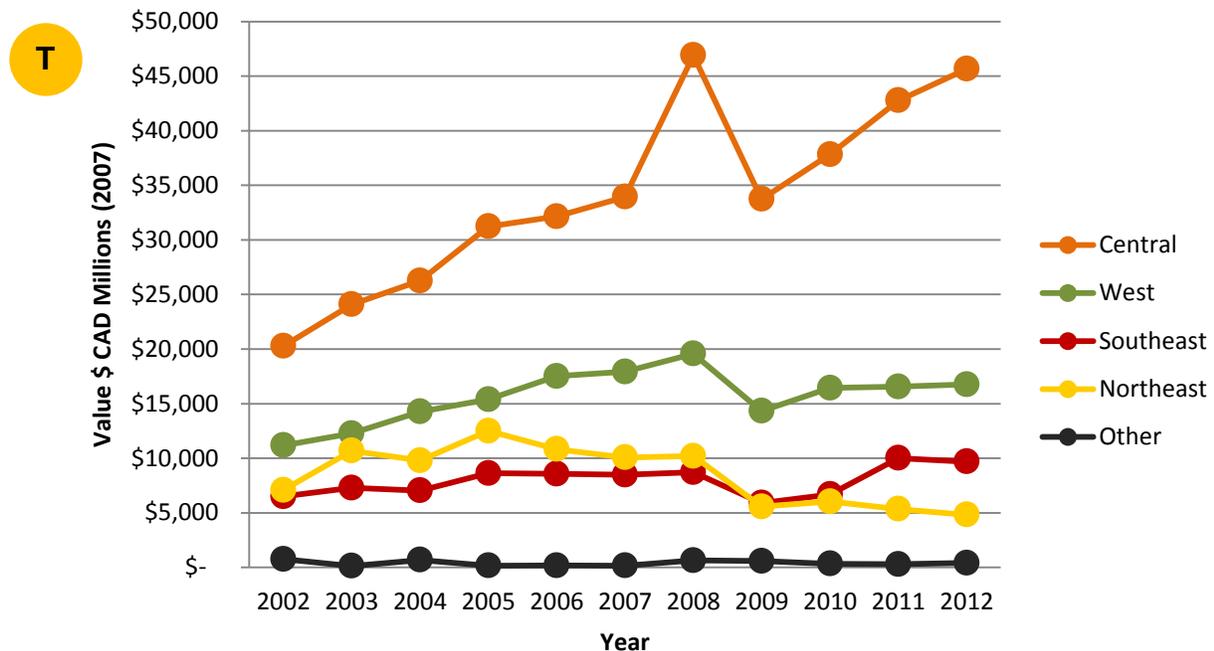
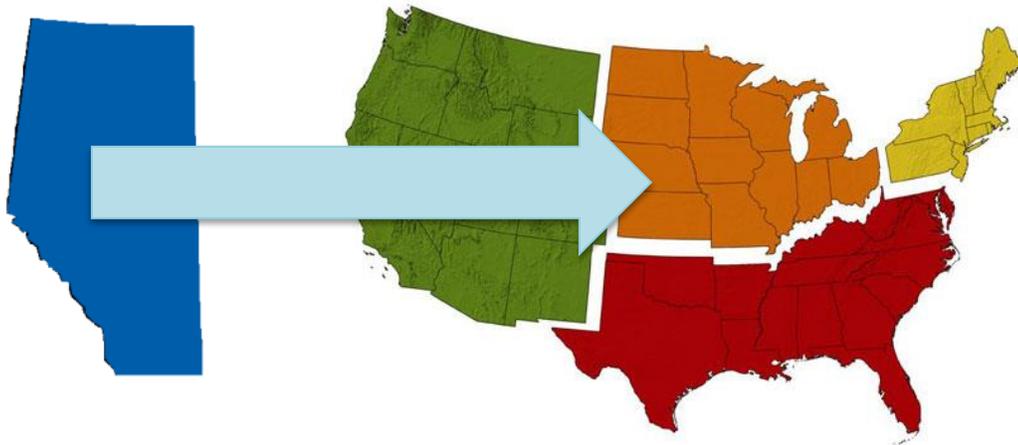
Exports to the United States, by Mode



Year	Road	Intermodal (Rail & Marine)	Air	Other (Pipeline)
2012	\$8,175	\$10,983	\$401	\$57,767
2011	\$6,727	\$9,943	\$326	\$57,991
2010	\$5,689	\$9,750	\$352	\$51,540
2009	\$5,742	\$7,866	\$335	\$46,169
2008	\$6,571	\$10,238	\$450	\$68,763
2007	\$7,209	\$9,822	\$510	\$53,029
2006	\$7,419	\$9,634	\$793	\$51,381
2005	\$6,804	\$8,771	\$709	\$52,181
2004	\$6,598	\$7,674	\$624	\$43,108
2003	\$6,354	\$7,800	\$629	\$40,207
2002	\$8,214	\$5,783	\$725	\$31,053

- By value, Alberta’s exports by intermodal (rail and marine) and by road to the United States exceeded pre-recession levels in 2012, while exports by pipeline are still recovering.
- By value, Alberta’s exports by air to the United States during this period peaked in 2006 and have remained below the 2008 (pre-recession) value through 2012.

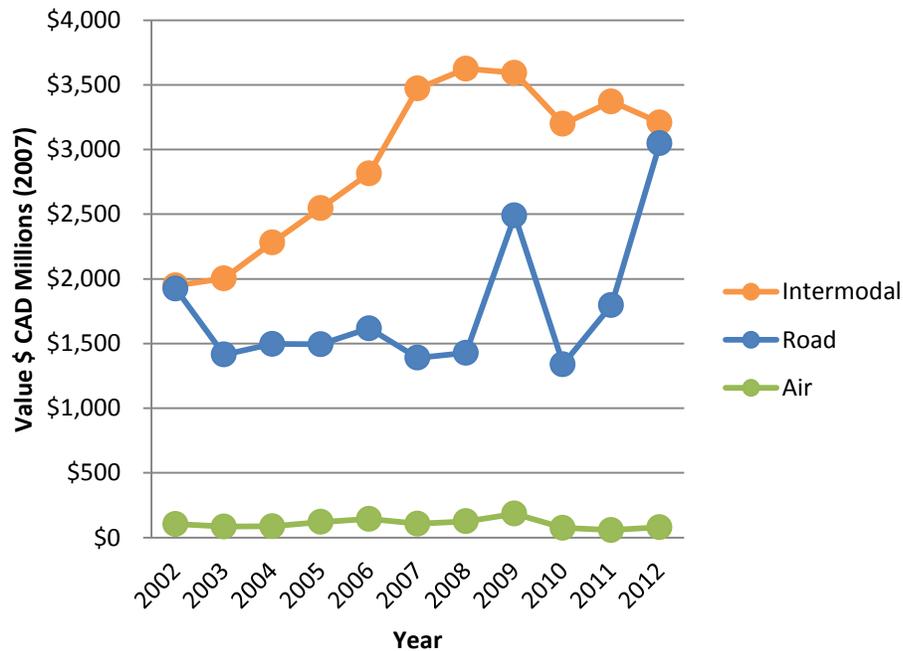
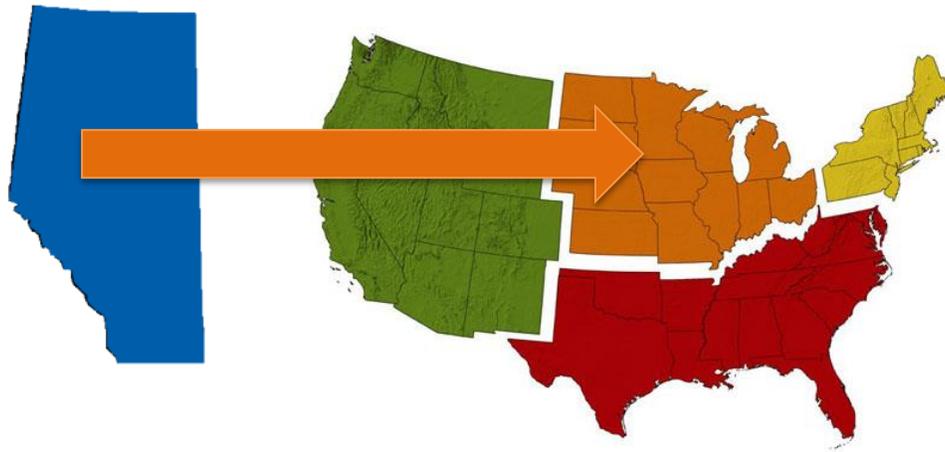
Exports to the United States by Region of Destination, all Modes



- Alberta’s exports to the Central, West and Southeast United States have trended upwards since 2002.
- Since 2010, by value, Alberta’s exports to the Southeast United States have surpassed Alberta’s exports to the Northeast United States. The difference amounted to \$4.9 billion or 6.3% of Alberta’s total exports to the United States in 2012.

Note: The following states are included in each of the regions. The *Central* region includes Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota and Wisconsin; the *Southeast* region includes Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Oklahoma, North Carolina, South Carolina, Tennessee, Texas, Virginia and West Virginia; the *West* region includes Arizona, California, Utah, Colorado, Idaho, Montana, New Mexico, Nevada, Oregon, Washington and Wyoming; the *Northeast* region includes Connecticut, District Of Columbia, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island and Vermont; and Alaska, Hawaii, Puerto Rico and United States Virgin Islands are considered in the *Other* region.

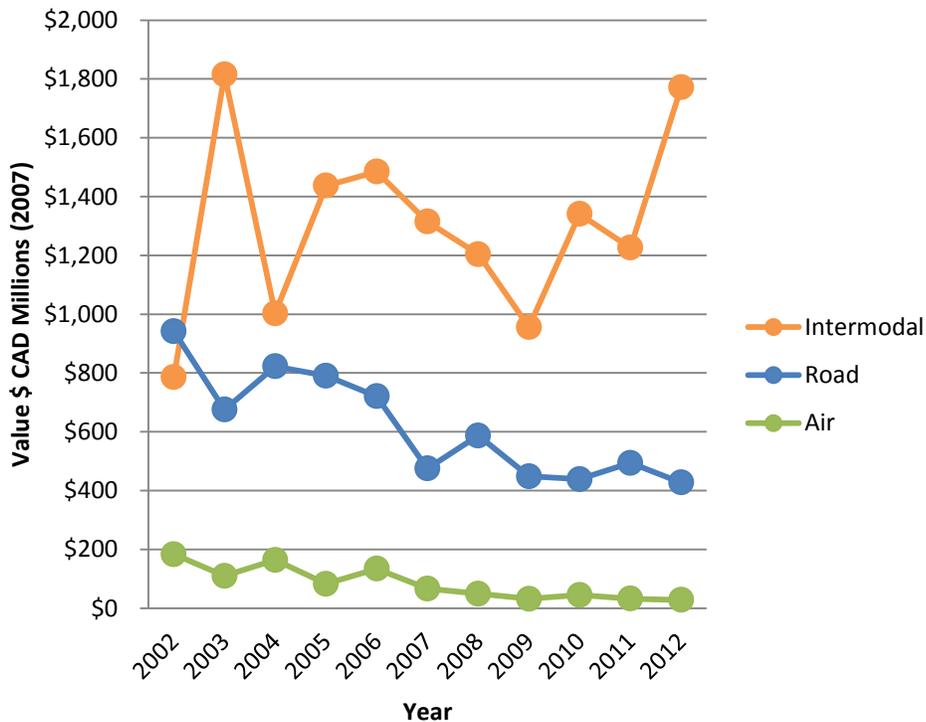
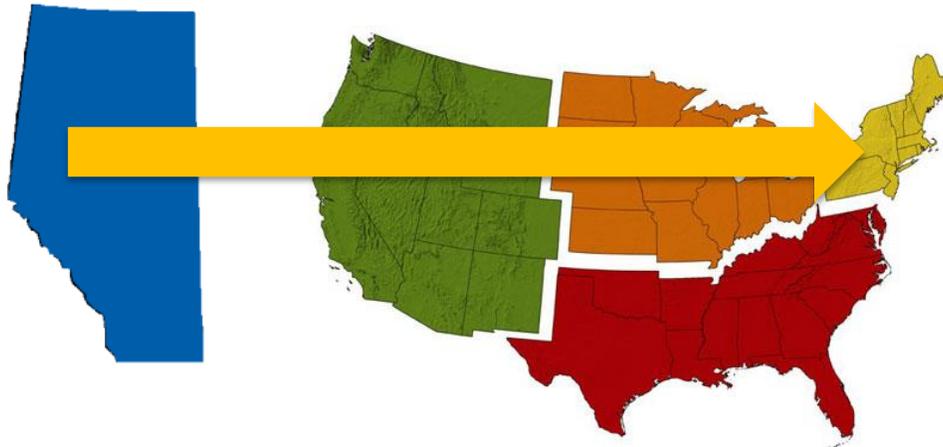
Exports to the Central United States, by Mode



- Alberta's exports to the Central United States by intermodal (rail and marine) peaked in 2008 prior to declining. From 2002 to 2012, Alberta's exports to the Central United States by intermodal (rail and marine) grew by 65% or \$1.3 billion.
- During this period, Alberta's exports to the Central United States by road peaked in 2012, almost attaining the same value as Alberta's intermodal exports to the Central United States for the first time since 2002.
- Alberta's air exports to the Central United States peaked in 2009 prior to declining. Over this time, Alberta's air exports to the Central United States declined 24% or \$25 million.

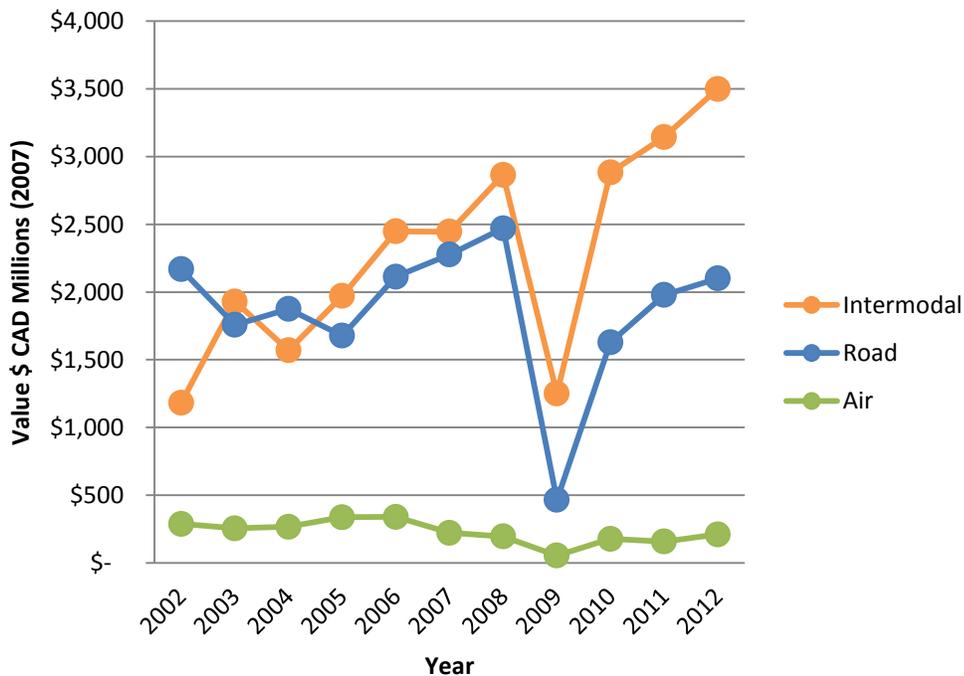
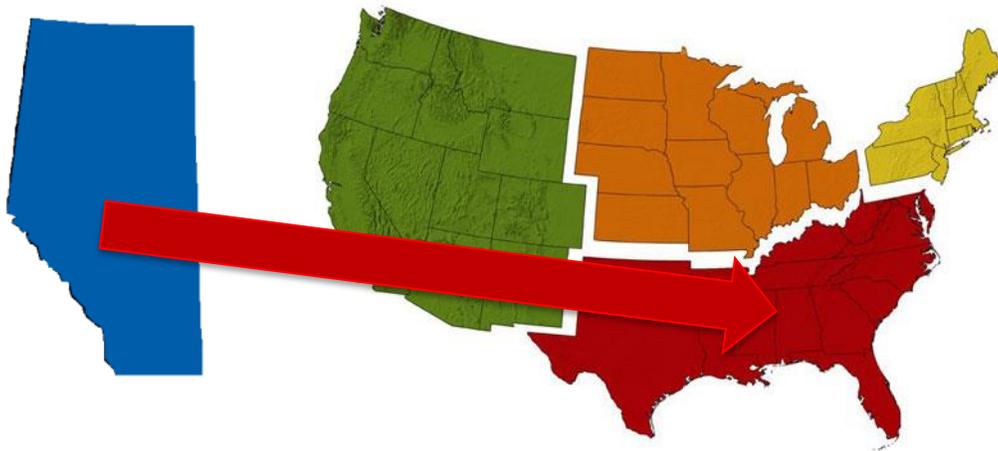
Note: Pipeline omitted to allow for clearer representation of intermodal, road and air trends.

Exports to the Northeast United States, by Mode



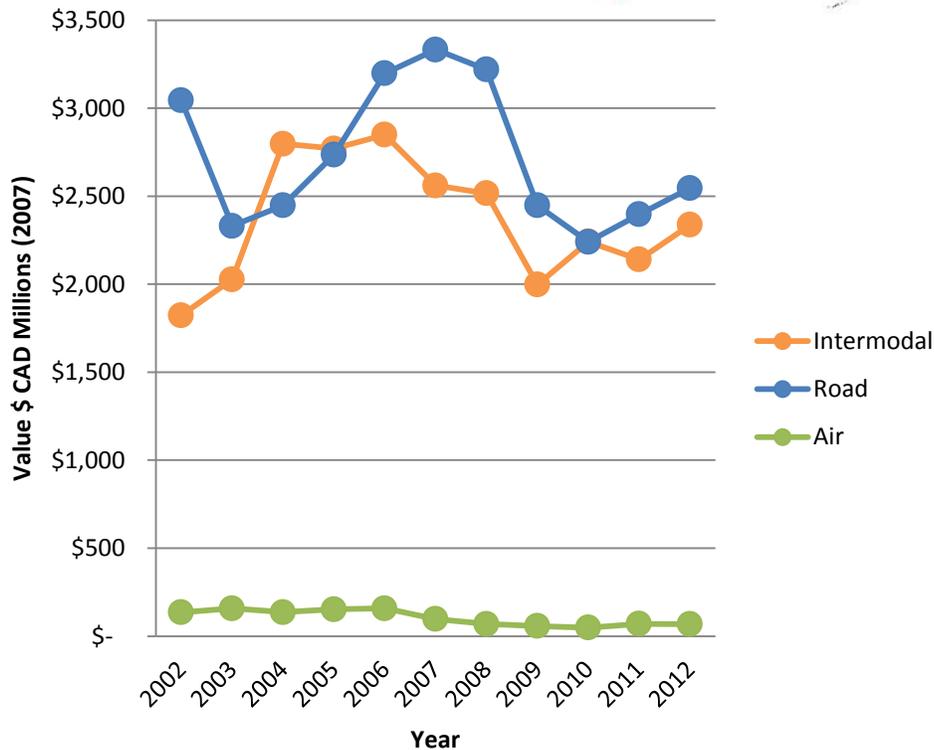
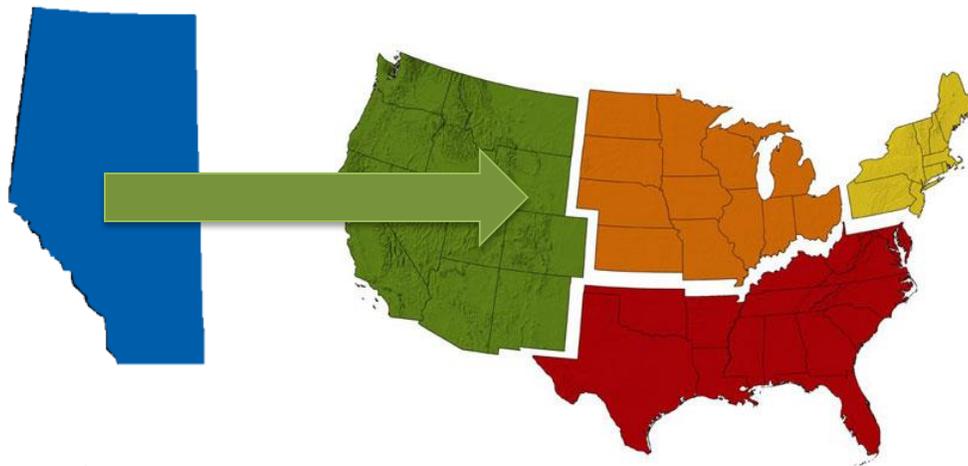
- From 2002 to 2012, by value, Alberta's exports to the Northeast United States by road and by air have declined by 55% or \$515 million and 85% or \$155 million, respectively.
- From 2002 to 2012, the value of Alberta's exports to the Northeast United States by intermodal (rail and marine), although much more volatile, increased overall by 126% or \$987 million.

Exports to the Southeast United States, by Mode



- Alberta’s exports to the Southeast United States by intermodal (rail and marine), by value, declined sharply in 2009 due to the recession and then rebounded to pre-recession levels by 2010, with an overall increase from 2002 to 2012 of almost 200% or \$2.3 billion.
- The value of Alberta’s exports to the Southeast United States by air, by value, declined by 27% or \$78 million from 2002 to 2012, while Alberta’s exports to the Southeast United States by road were more volatile, with the 2012 value remaining almost on par with the 2002 value.

Exports to the West United States, by Mode



- The value of Alberta's exports to the West United States by road and by air declined 16% (or \$498 million) and 49% (or \$67 million) over this period, respectively. Conversely, the value of Alberta's exports to the West United States by intermodal (rail and marine) increased over 28% (or \$514 million) during this period.
- Road was the most common mode of transport during this period for Alberta's exports to the West United States, although exports by intermodal (rail and marine) were the primary mode of export in 2004, 2005 and again in 2010.

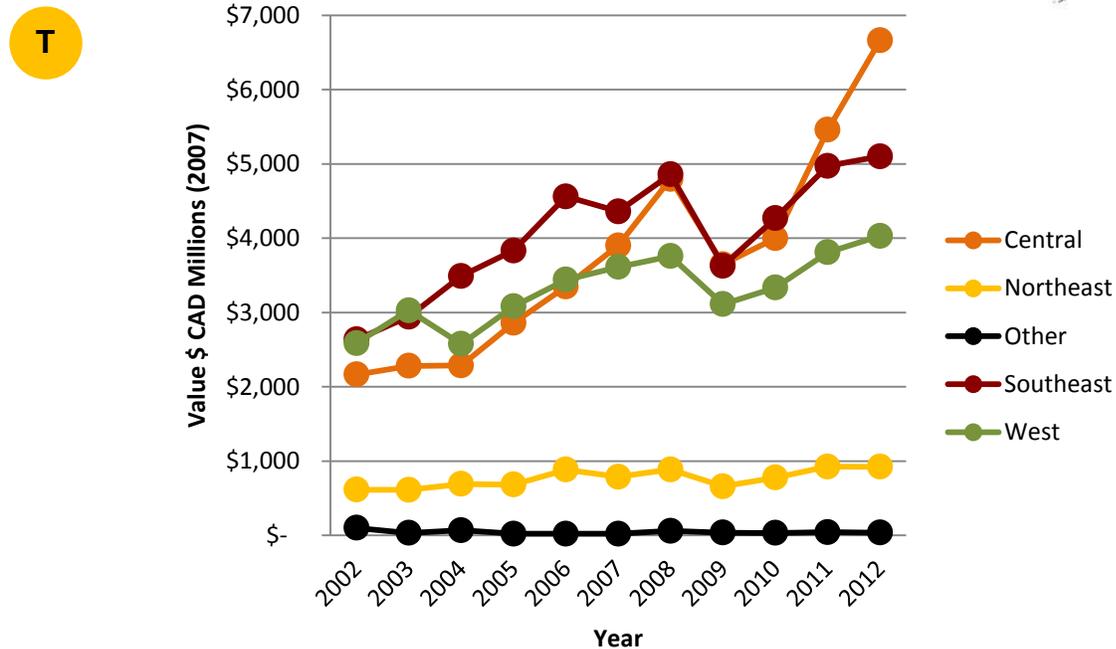
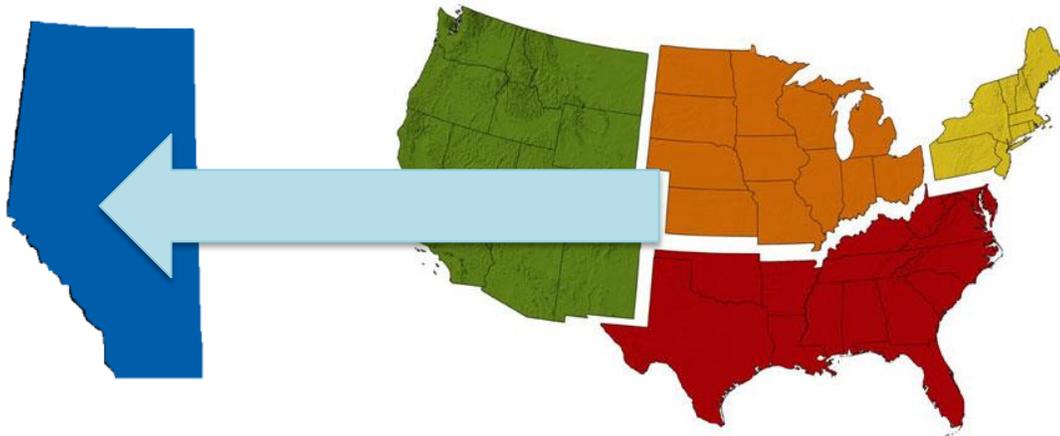
Imports from the United States, by Mode



Year	Road	Intermodal (Rail & Marine)	Air	Other (Pipeline)
2012	\$7,107	\$4,648	\$1,650	\$3,386
2011	\$6,740	\$4,481	\$1,679	\$2,306
2010	\$5,528	\$3,795	\$1,671	\$1,414
2009	\$4,664	\$3,233	\$1,827	\$1,359
2008	\$6,023	\$4,796	\$1,697	\$1,845
2007	\$6,012	\$3,846	\$1,849	\$1,175
2006	\$5,980	\$3,655	\$2,068	\$703
2005	\$5,207	\$2,628	\$2,074	\$688
2004	\$4,568	\$2,399	\$1,814	\$617
2003	\$4,398	\$2,226	\$1,709	\$944
2002	\$4,236	\$2,059	\$1,821	\$440

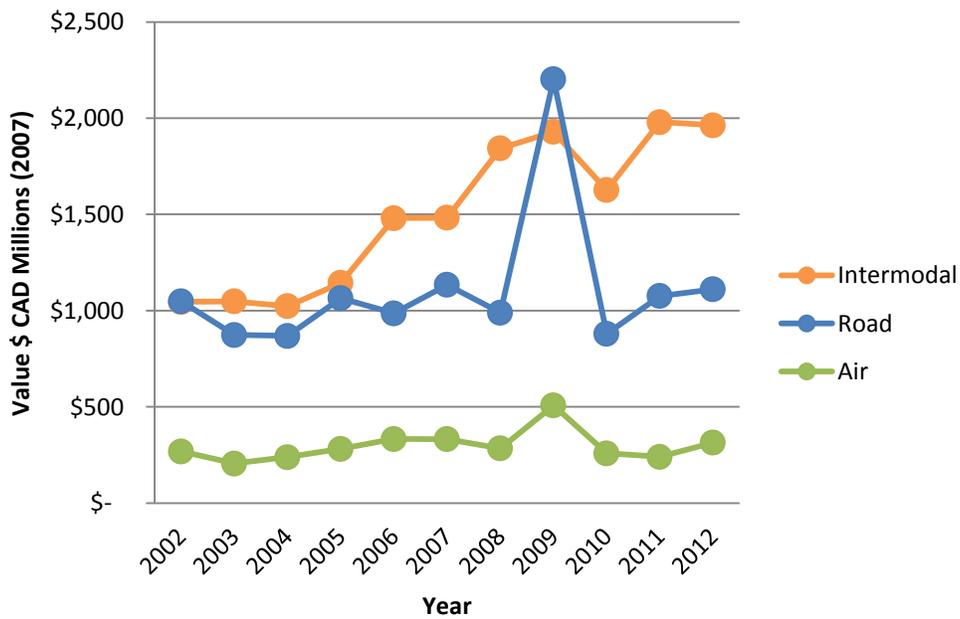
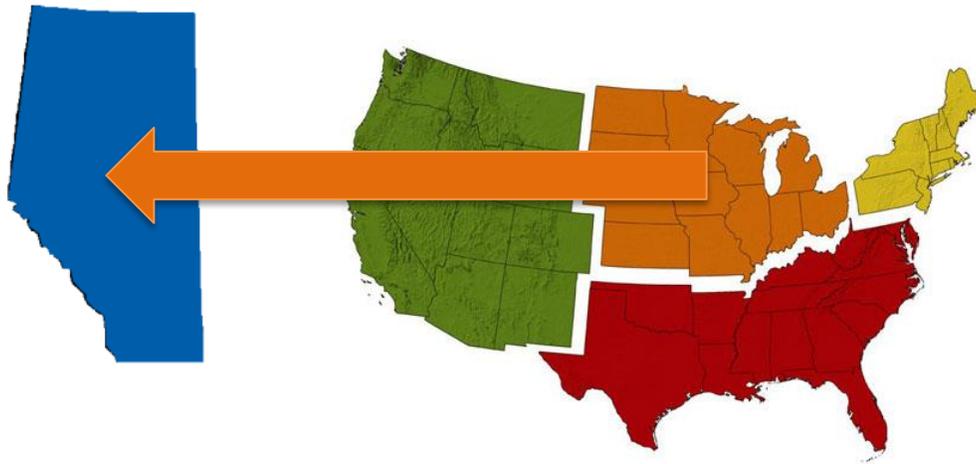
- By value, Alberta's imports from the United States by road, by intermodal, and by pipeline increased substantially between 2002 and 2012, while Alberta's imports from the United States by air during this period peaked in 2005 and declined slightly through 2012.

Imports from the United States by Region of Origin, all Modes



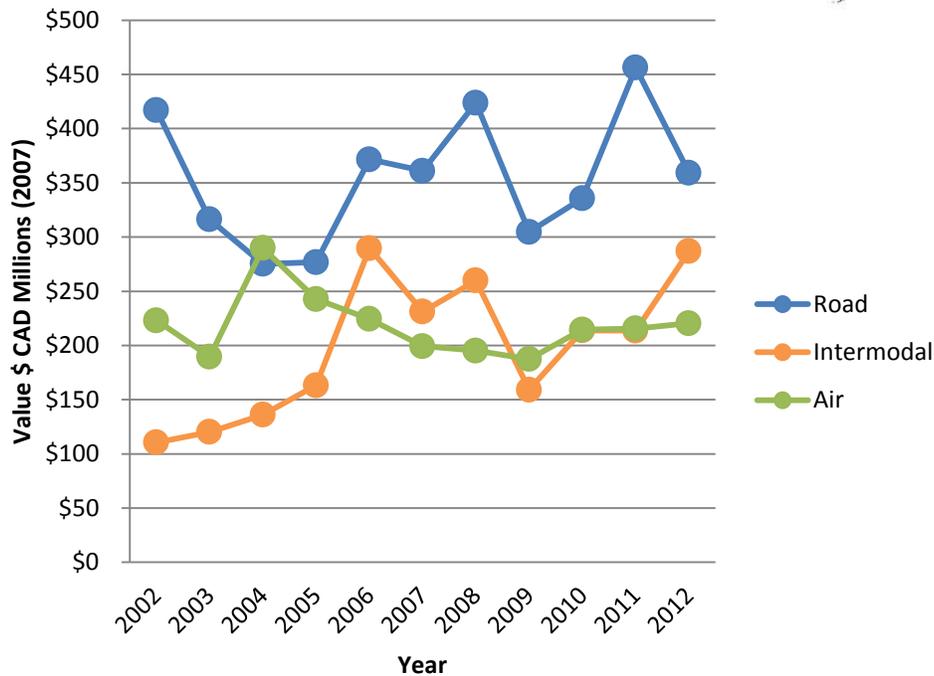
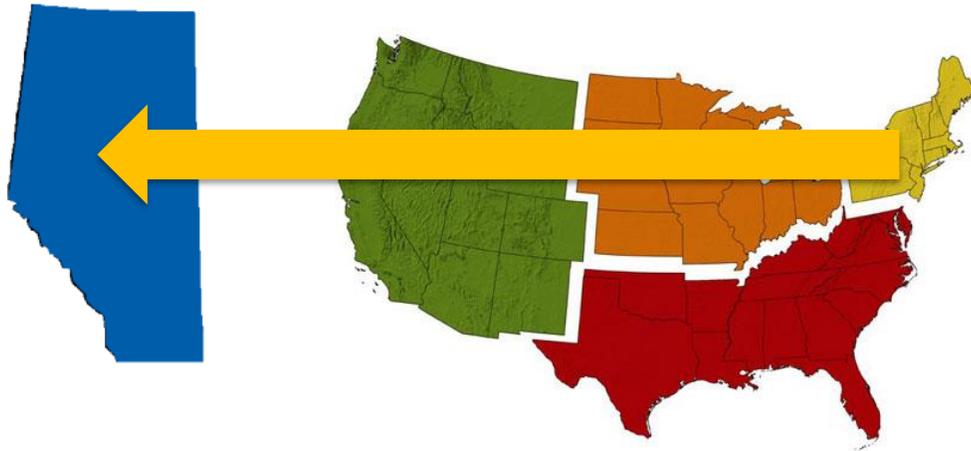
- From 2002 to 2012, the value of Alberta’s imports from the Central, Southeast and West regions of the United States reflect clear upward trends, while imports from the Northeast and Other regions have remained relatively constant.
- The most common mode of transport for Alberta’s imports from the Central region of the United States is rail, while road is the most common mode of transport for Alberta’s imports from the Northeast, Southeast and West regions of the United States.
- In 2011, the value of Alberta’s imports from the Central United States surpassed imports from the Southeast region. In 2012, the difference between Alberta’s imports from the Central and Southeast regions of the United States amounted to \$1.6 billion or 9.3% of Alberta’s total imports from the United States.

Imports from the Central United States, by Mode



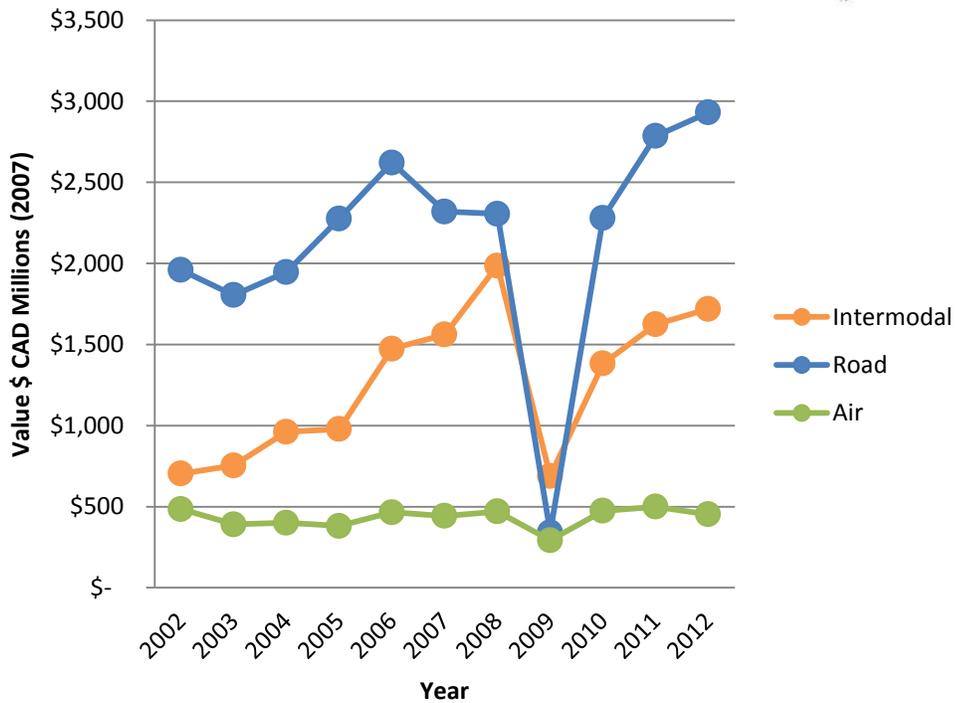
- By value, Alberta’s imports from the Central United States by intermodal have increased 88% or \$918 million from 2002 to 2012. By value, all modes of transport for imports from the Central United States increased over this period.

Imports from the Northeast United States, by Mode



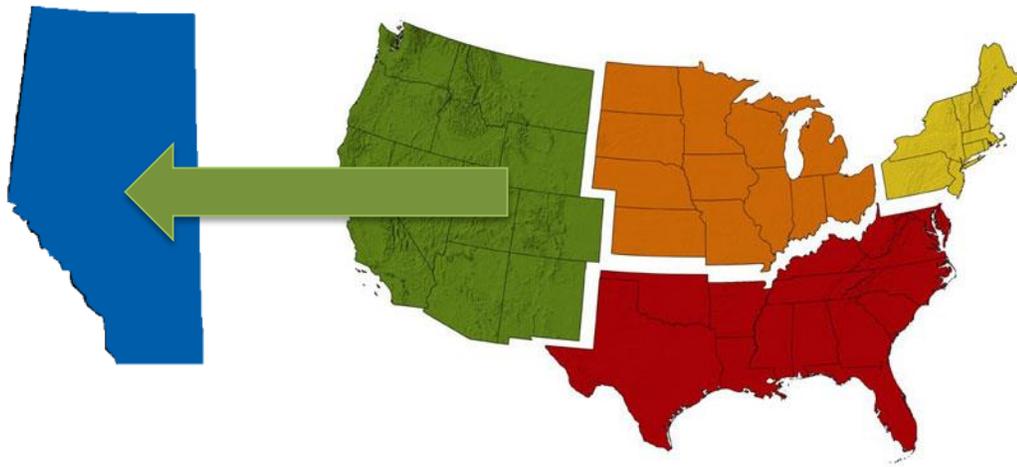
- During this period, the value of Alberta’s imports by air from the Northeast United States region peaked in 2004 before declining, with the 2012 value comparable to the value in 2002.
- The most common mode of transport for Alberta’s imports by value from the Northeast United States is by road, although the trends have been volatile during this period.
- From 2002 to 2012, the value of Alberta’s imports from the Northeast United States by intermodal (rail and marine) trended upwards, increasing 159% or \$176 million over this period.

Imports from the Southeast United States, by Mode

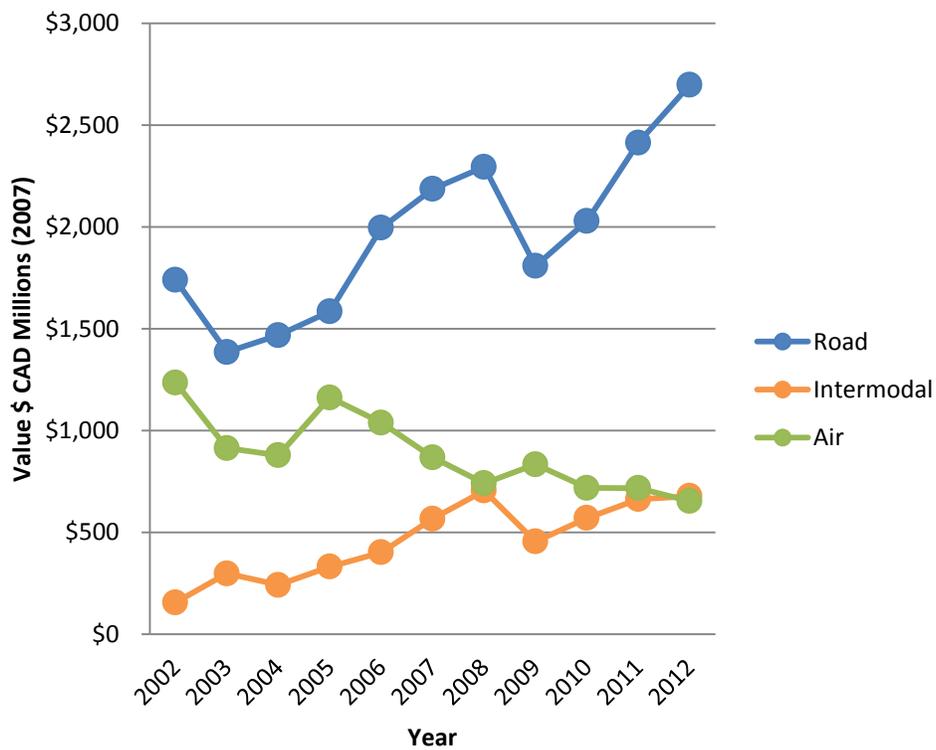


- Alberta’s imports from the Southeast United States by all modes declined dramatically in 2009 due to the recession. The value of Alberta’s imports by road and by air from the Southeast United States returned to pre-recession levels by 2010, while imports by intermodal are still recovering.
- From 2002 to 2012, the value of Alberta’s imports from the Southeast United States by intermodal and by road increased by 144% (or \$1 billion) and 50% (or \$972 million) respectively, while Alberta’s imports by air from this region declined by 7% or \$32 million.

Imports from the West United States, by Mode



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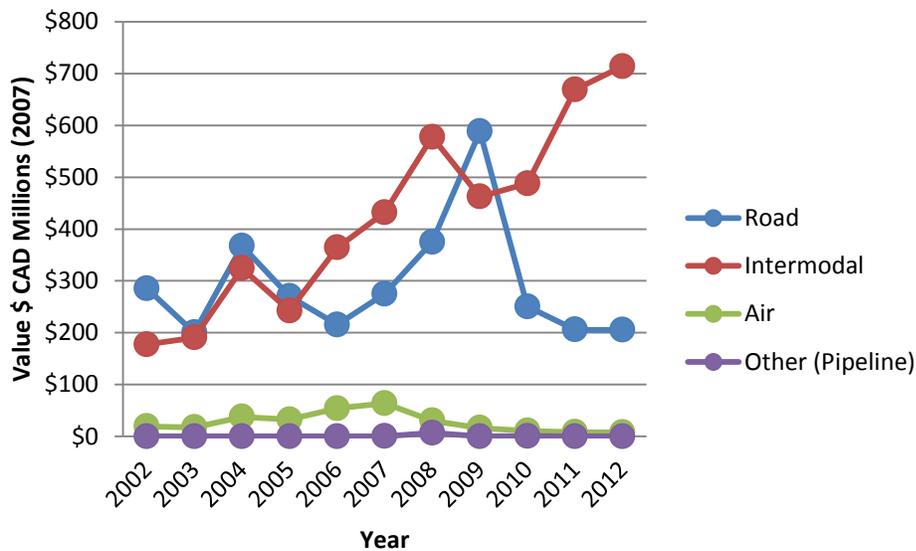
- From 2002 to 2012, the value of Alberta's imports from the West United States by intermodal and by road increased over 335% or \$523 million and 55% or \$958 million respectively, while Alberta's imports by air declined 47% or \$582 million.

Trade with Mexico

Exports to Mexico, by Mode



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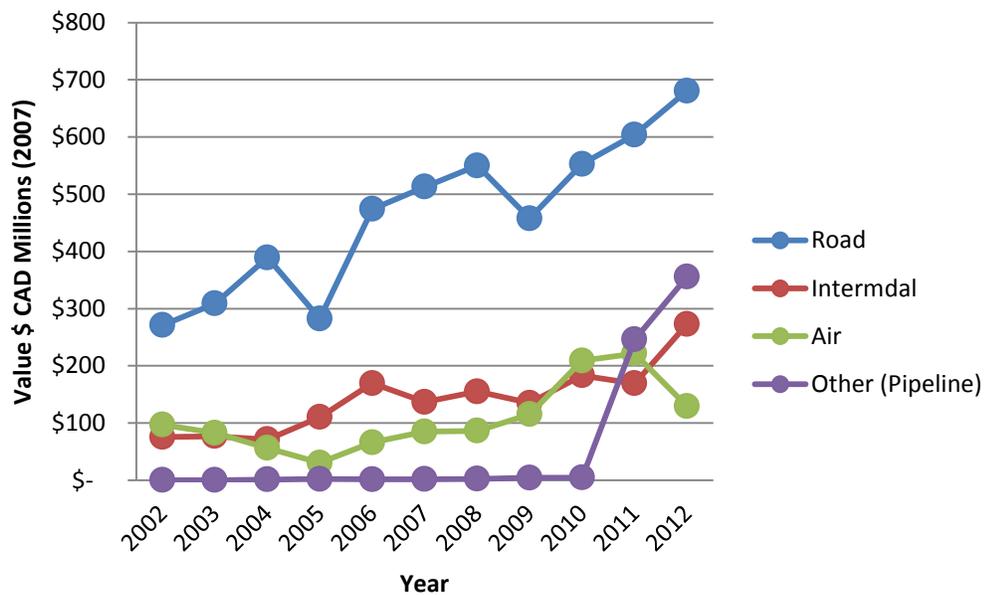


- By value, Alberta's exports to Mexico by marine continued to trend upwards throughout most of this period, with the 2012 value exceeding the 2002 value by over \$323 million.
- By value, Alberta's exports to Mexico by rail trended upwards until 2008 before declining in the 2009 recession year, followed by upward trends from 2009 to 2012. Overall, the growth of Alberta's exports to Mexico by rail during this period was \$213 million.
- The value of Alberta's exports to Mexico by air peaked in 2007 and declined through the rest of this period.

Imports from Mexico, by Mode



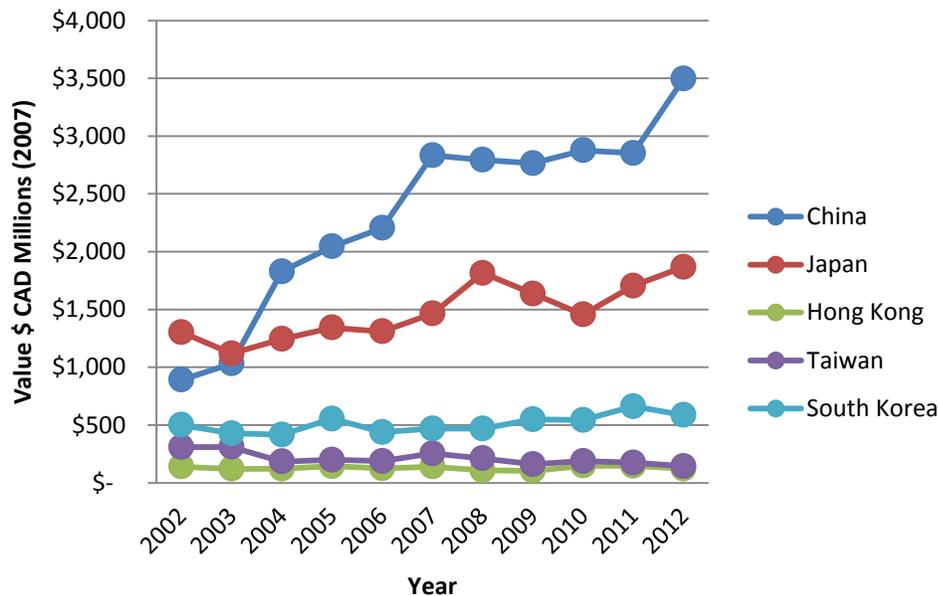
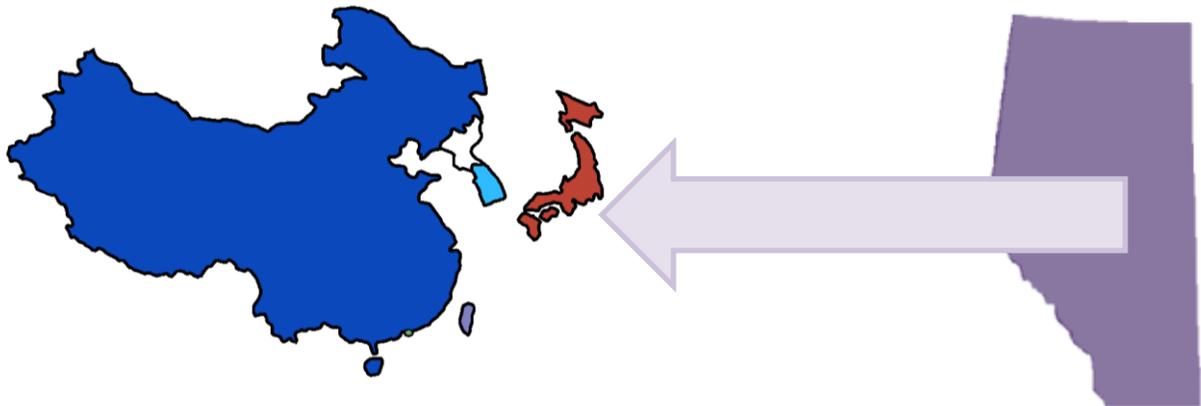
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- Alberta’s imports from Mexico by road have trended upwards since 2002, with the 2012 value exceeding the 2002 value by over \$409 million.
- Alberta’s intermodal imports from Mexico by have trended upwards during this period, with overall growth of \$197 million.
- From 2002 to 2012, the value of Alberta’s imports from Mexico by air peaked in 2011 before declining in 2012.

Trade with Asia-Pacific/Oceania Countries

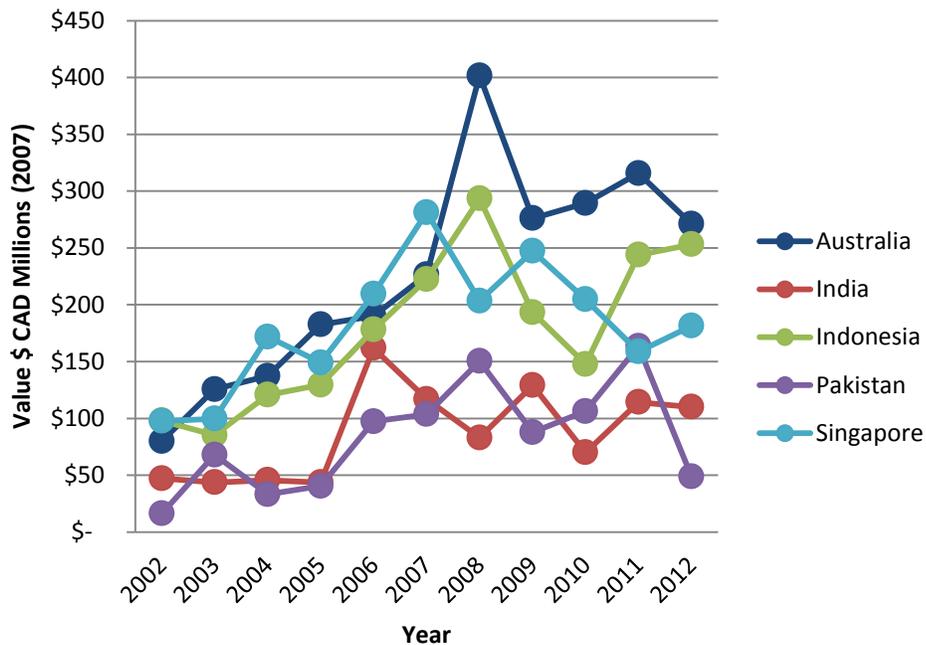
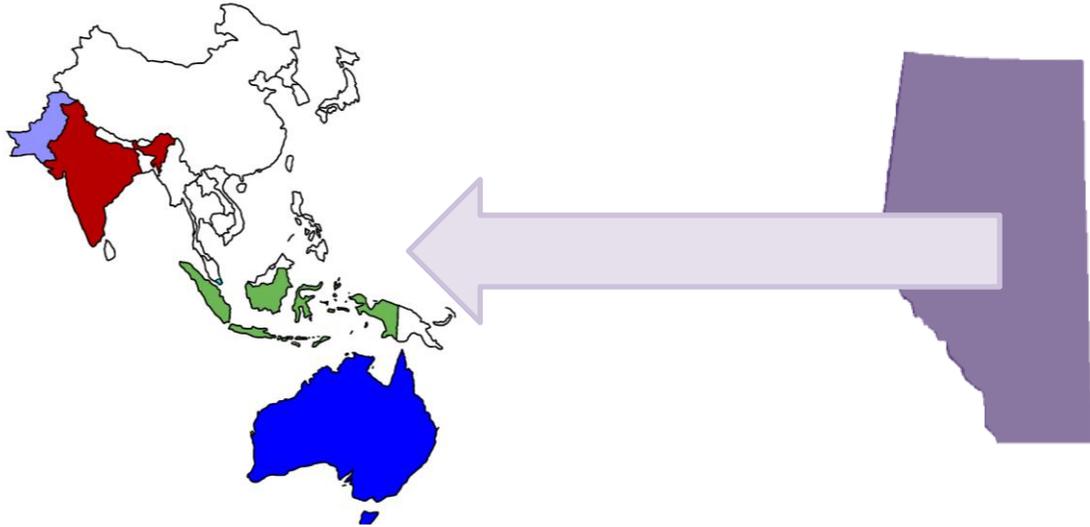
Exports to Northern Asia-Pacific Countries, all Modes



- Alberta’s exports to the China and Japan have experienced strong growth since 2002, with the 2012 value exceeding the 2002 value by 72% (or \$2.6 billion) and 13% (or \$565 million) for China and Japan, respectively.
- From 2002 to 2012, by value, Alberta’s exports to Hong Kong and South Korea remained relatively constant, while Alberta’s exports to Taiwan have declined overall by 54% or \$165 million.

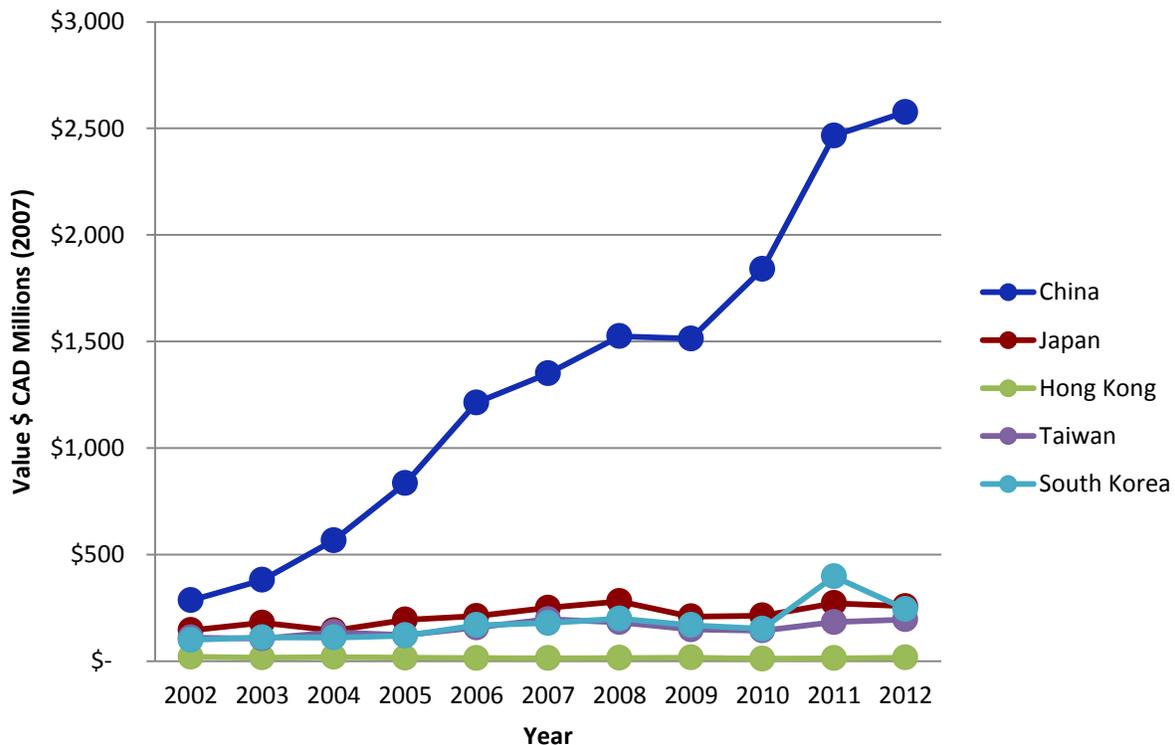
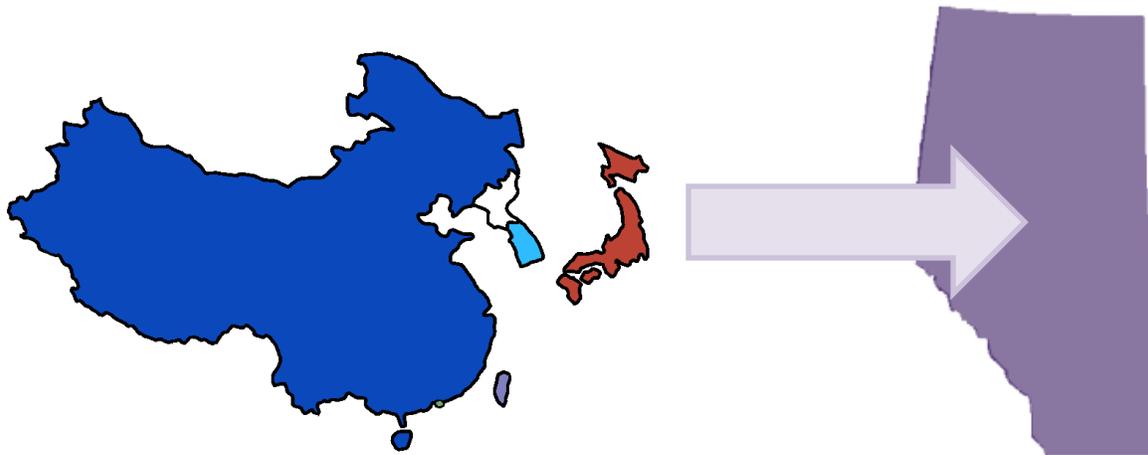
Note: The Oceania/Asia-Pacific countries listed in this report were selected based on the listing by the [Alberta Ministry of International and Intergovernmental Relations](#). The following regions are considered in this report: North Asia, including the Greater China Region (China, Hong Kong, Taiwan), Japan, and Korea, and Oceania/South Asia including; Australia, India, Indonesia, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Thailand, and Vietnam.

Exports to Oceania/Southern Asia-Pacific Countries, all Modes



- Alberta’s export trends to five key Oceania/South Asia-Pacific countries appear much more volatile. Alberta’s exports to Australia, India and Indonesia have trended upwards overall, with growth of 239% or \$191 million, 133% or \$63 million and 158% or \$155 million, respectively.
- During this period, the value of Alberta’s exports to Singapore peaked in 2007 prior to declining.
- From 2002 to 2012, Alberta’s exports to Pakistan, by value, peaked in 2011 prior to declining in 2012.

Imports from Northern Asia-Pacific Countries, all Modes

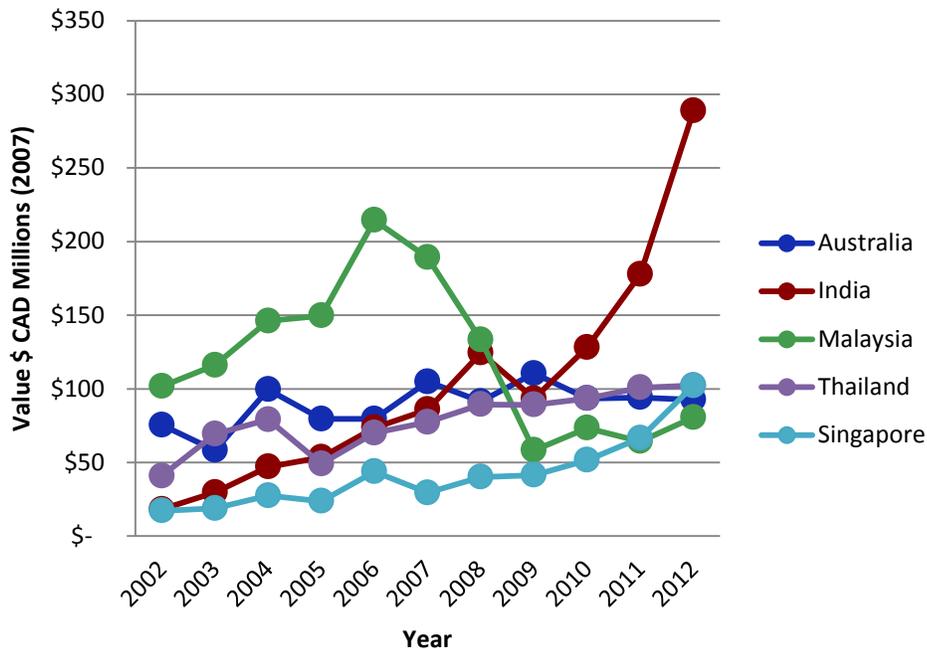


- By value, Alberta's imports from China have experienced strong growth since 2002, with the 2012 value eight times above the 2002 value, for a difference of \$2.3 billion.
- From 2002 and 2012, the value of Alberta's imports from Japan, Taiwan and South Korea have remained constant and/or slightly increased, while the value of Alberta's imports from Hong Kong have slightly decreased.

Imports from Oceania/Southern Asia-Pacific Countries, all Modes



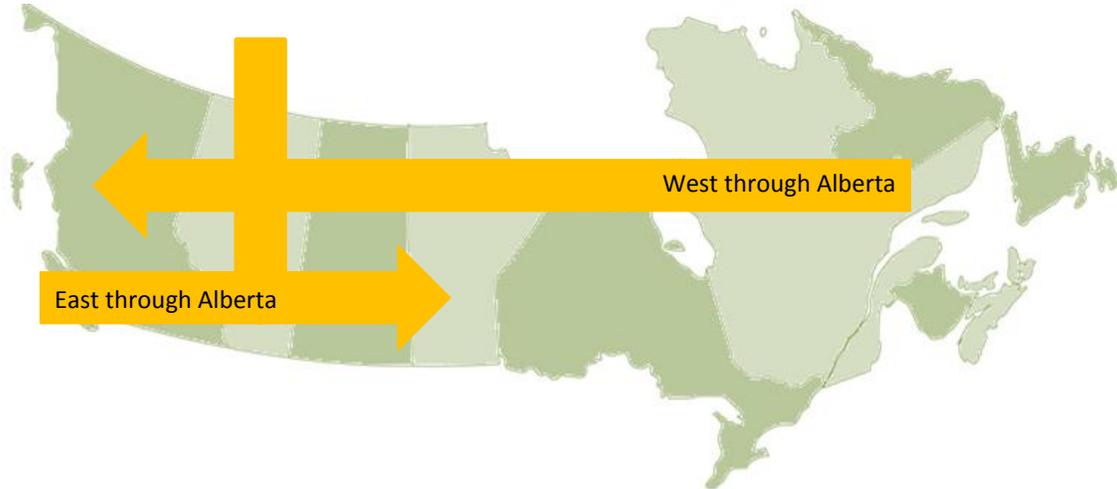
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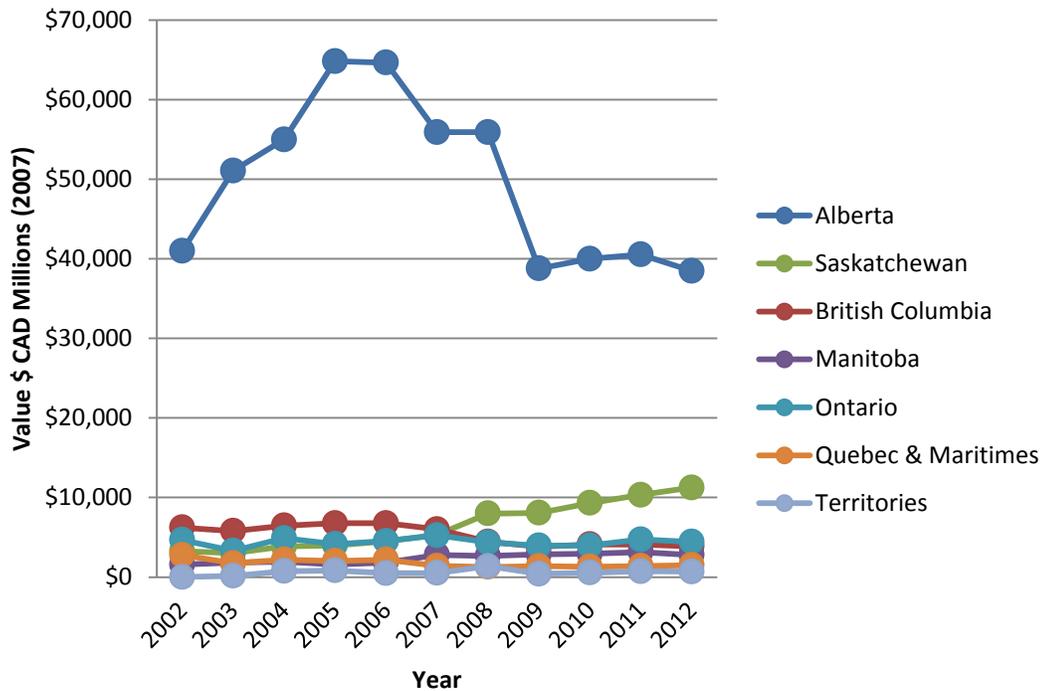
- By value, Alberta’s imports from five key Oceania/South Asia-Pacific countries reflect upward trends from Singapore, Thailand, Australia, and India with the strongest growth in Alberta’s imports from India, with the 2012 value \$271 million over the 2002 value.
- By value, Alberta’s imports from Malaysia increased from 2002 to 2006 and then declined from 2006 to 2009, before rebounding slightly from 2009 to 2012, with the 2012 value below the 2002 value.

Canadian Provincial Exports

Canadian Provincial Exports – Value of Goods Moving from Canadian Provinces through Alberta to Alternative Provincial Gateways (Through Traffic), all Modes



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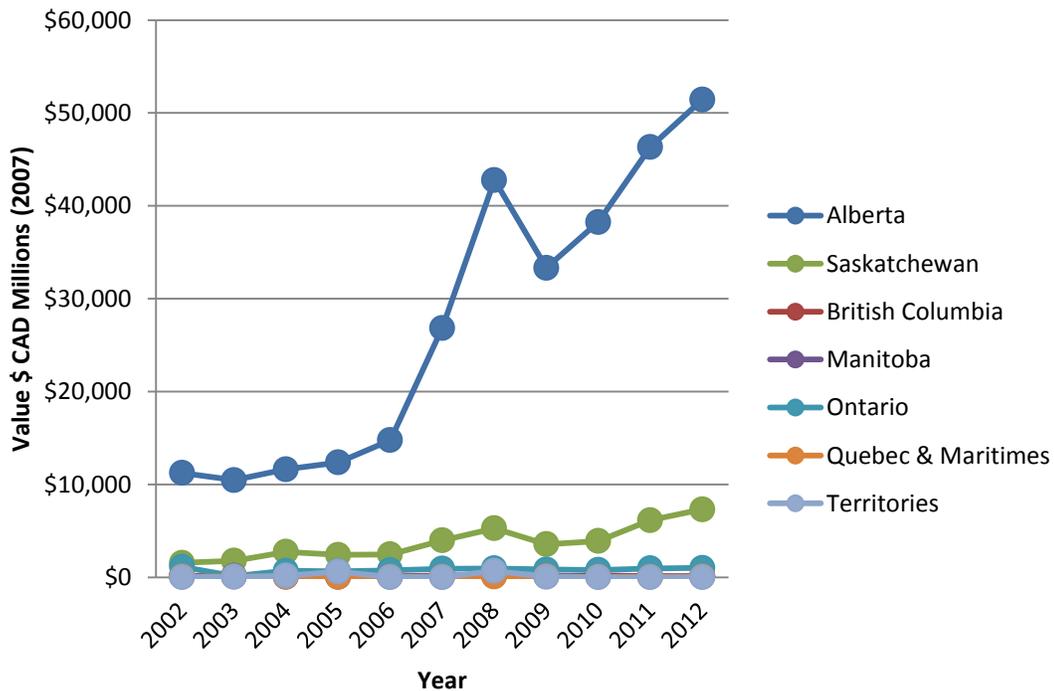


- The strength of Alberta’s infrastructure is important in facilitating the movement of goods from other Canadian provinces to foreign markets, for example, goods manufactured in Ontario that move by road domestically to British Columbia for export travel on Alberta’s highway network. In 2012, over \$63 billion worth of Canadian exports were moved through Alberta to ports of exit in other provinces.

Canadian Provincial Exports – Value of Goods Moving through Alberta Ports, all Modes



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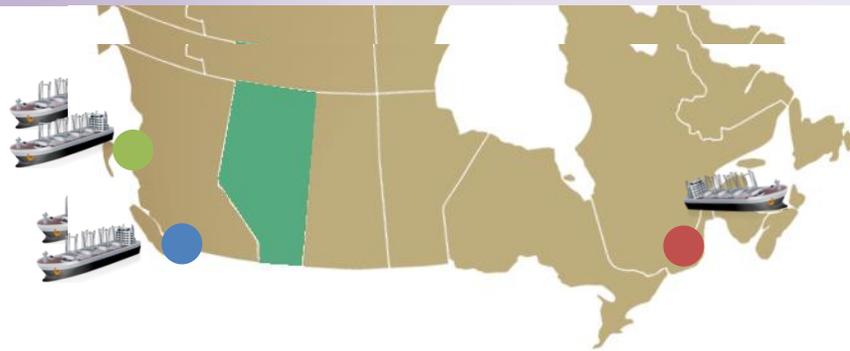
- Shippers from other Canadian provinces and territories also may choose to ship their goods through ports located in Alberta. In 2012, over \$60 billion worth of Canadian exports were moved through Alberta’s ports.
- Alberta ports, alphabetically, include:
 - Aden, AB
 - Calgary, AB
 - Carway, AB
 - Coutts, AB
 - Del Bonita, AB
 - Edmonton, AB
 - Lethbridge, AB
 - Wild Horse, AB

Alberta Intermodal (Rail & Marine) Trade

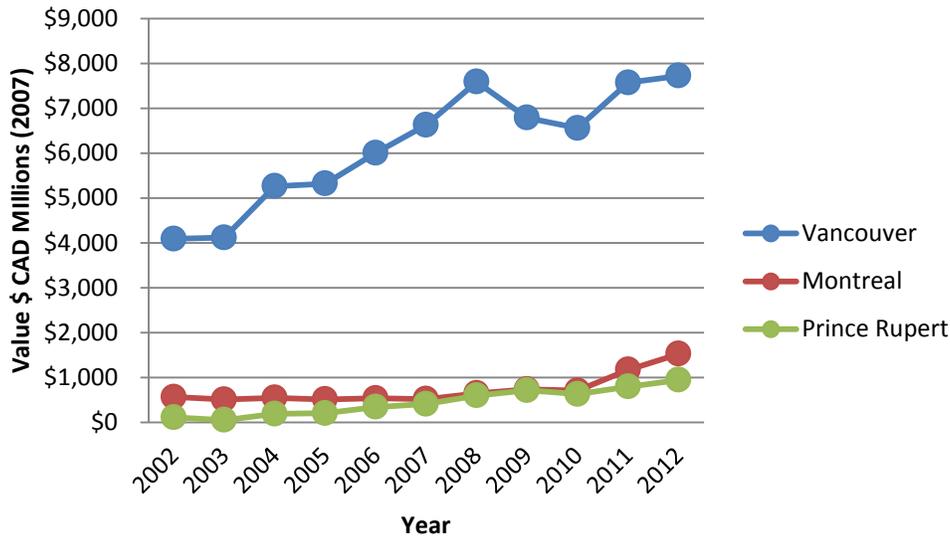
Intermodal transportation utilizes two or more transportation modes in the movement of goods. A domestic container movement is a common example of intermodal transportation. For example, a container is picked up by truck from a shipping location and delivered to the rail provider, where it will be put on a train departing for a given intermodal facility, then transported again by truck to the final destination. In this report, the rail and marine modes of transport are grouped together and may be referred to interchangeably as intermodal or rail and marine.

Exports by Intermodal (Rail & Marine)

Exports by Marine – Top 3 Ports of Exit



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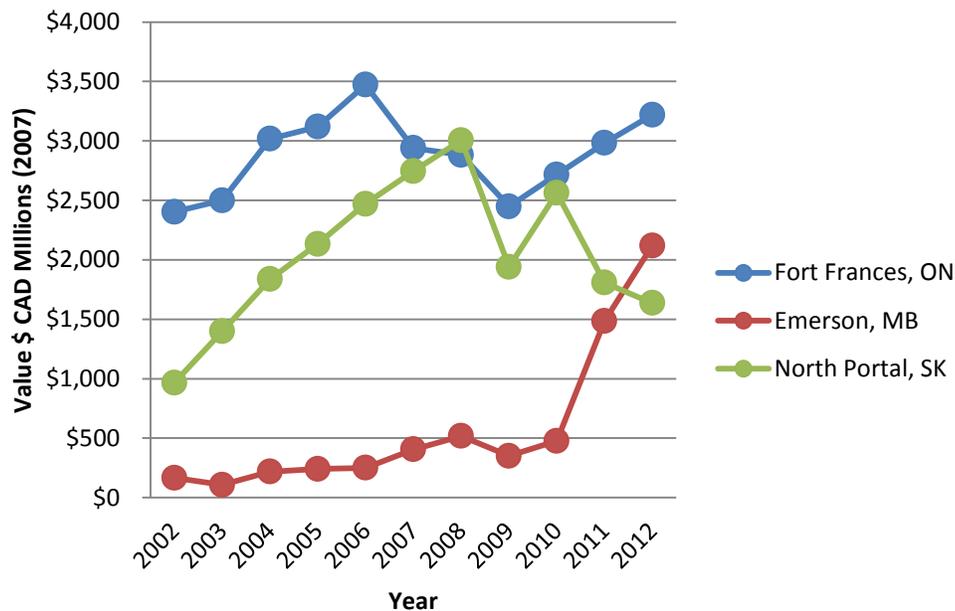


- Since Alberta is an inland province, large volumes of goods are moved to and from marine ports as well as other domestic and international ports by various modes of transportation. The majority of Alberta’s marine exports are moved through British Columbia. Prince Rupert, British Columbia moved into Alberta’s Top Three Ports of Exit for marine exports in 2007, where it remained through 2012.
- All three of these ports of exit for Alberta’s marine exports experienced growth during this period, with the Vancouver, British Columbia seeing the largest growth, by value, with the 2012 value exceeding the 2002 value by 89% or \$3.6 billion.

Exports by Rail – Top 3 Ports of Exit



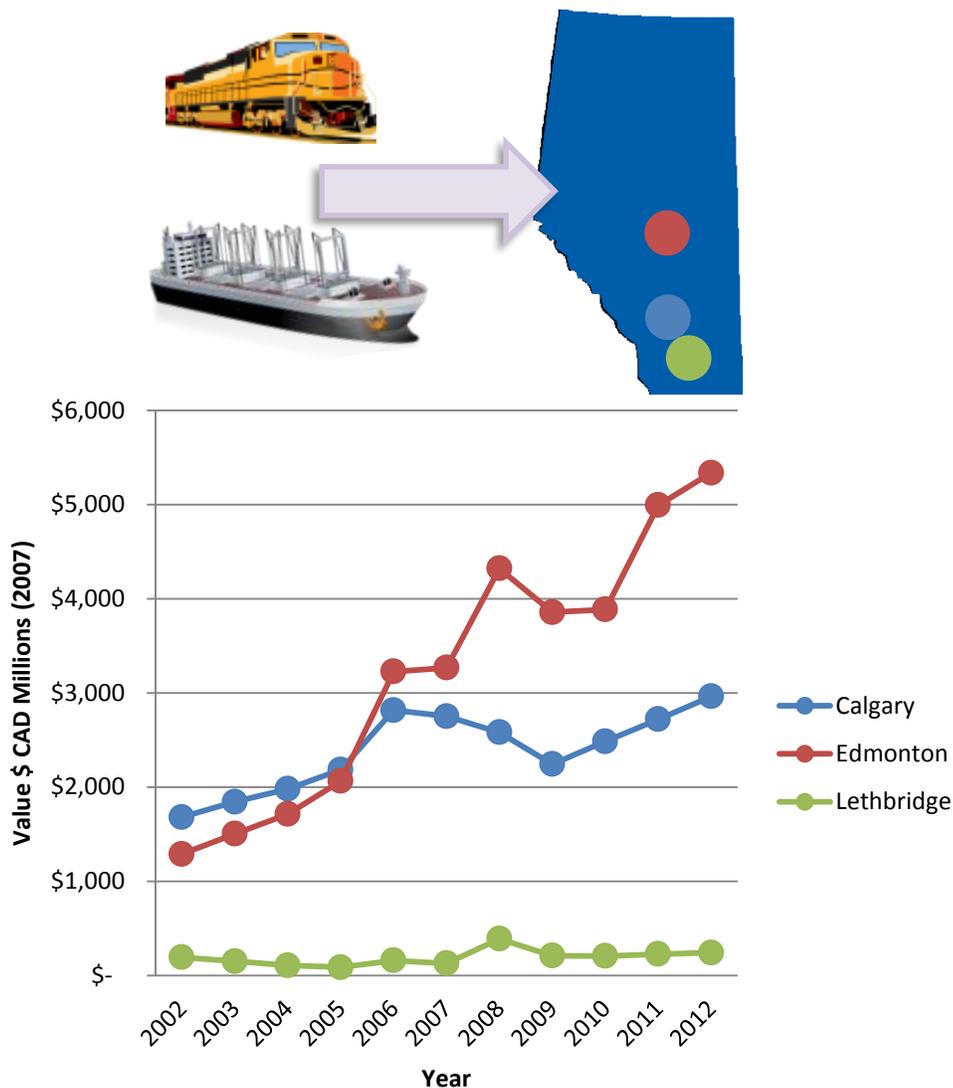
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- Since Alberta is an inland province, large volumes of goods are moved by rail to and from other inland ports, destined for the United States and Mexico by rail or for marine ports for export to their final destination.
- The majority of Alberta’s rail exports are moved through Fort Frances, Ontario however, there is rapid growth in Alberta’s rail exports through Emerson, Manitoba. The value of Alberta’s rail exports through Emerson, Manitoba increased over 10 times or nearly \$2 billion from 2002 to 2012.
- Alberta’s rail exports through North Portal, Saskatchewan grew every year from 2002 to 2008 prior to declining overall from 2008 and 2012.

Imports by Intermodal (Rail & Marine)

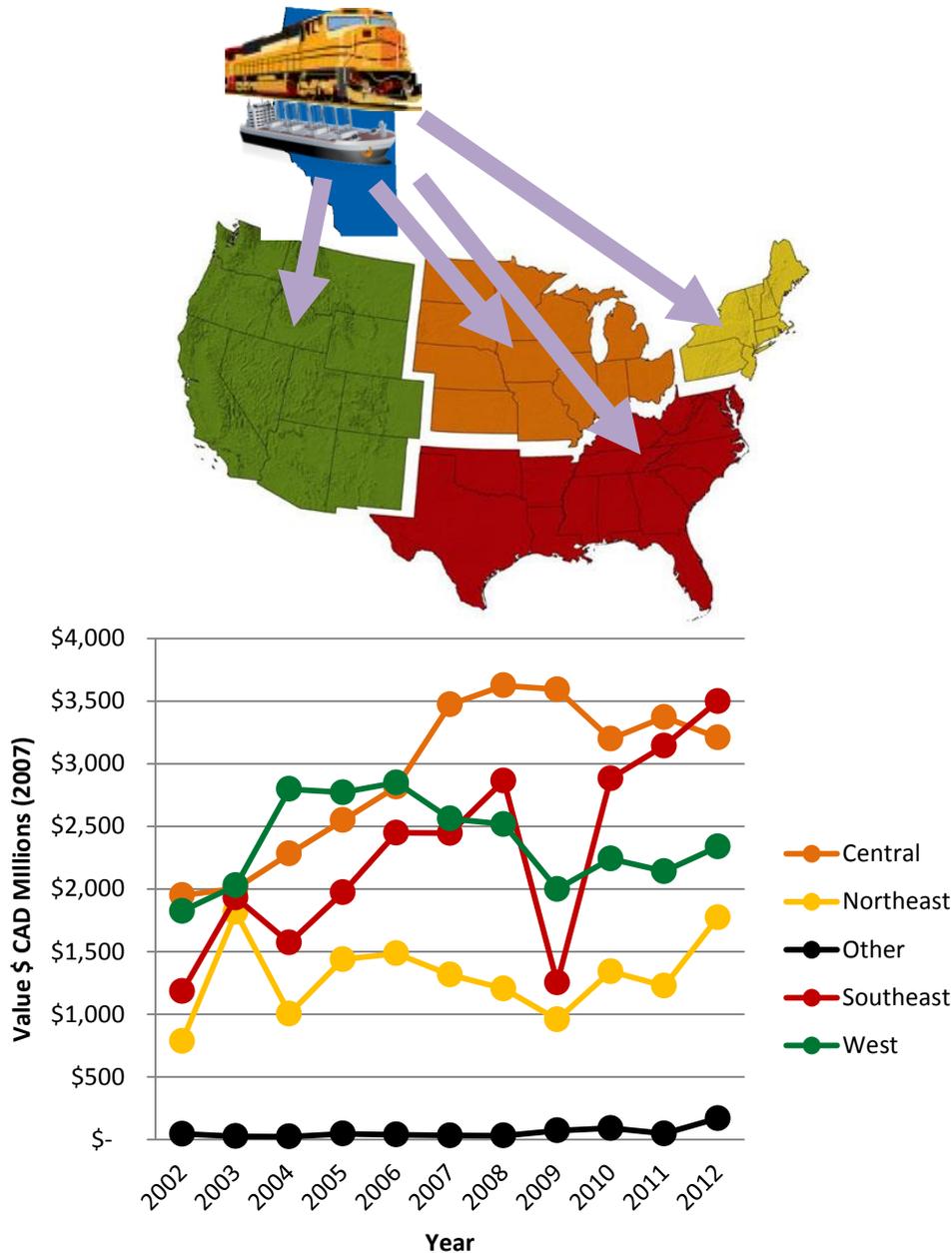
Imports by Intermodal (Rail & Marine) – Top 3 Ports of Clearance



- Edmonton and Calgary, with the bulk of the province's population and intermodal facilities, represent the principal gateways (ports of clearance) for goods imported by intermodal. During this period, the value of Alberta's intermodal imports through Edmonton exceeded Calgary in 2006, with Edmonton remaining Alberta's largest port of clearance through 2012. From 2002 to 2012, the value of Alberta's imports by intermodal through the port of Edmonton increased 314% or over \$4 billion.
- From 2002 to 2012, the value of Alberta's imports by intermodal through the ports of Calgary and Lethbridge increased 76% or \$1.3 billion and 26% or \$49 million, respectively.

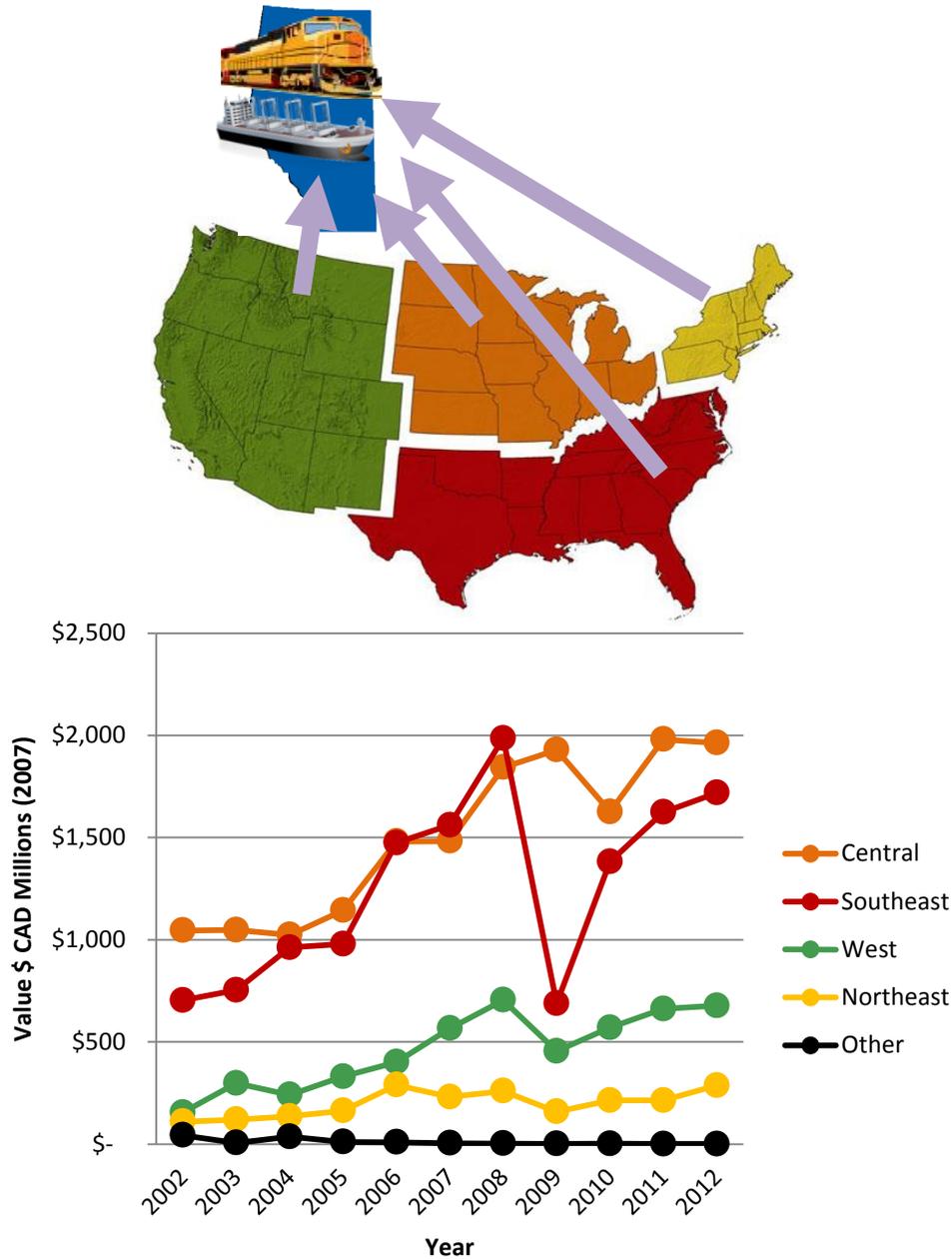
Trade with the United States by Intermodal (Rail & Marine)

Exports to the United States by Intermodal (Rail & Marine), by Region of Destination



- The value of Alberta's intermodal exports to the Southeast United States experienced strong growth. From 2002 to 2012, the value of Alberta's exports by intermodal to the Southeast United States increased 196% or \$2.3 billion.
- During this period, the value of Alberta's intermodal exports to all other regions of the United States also increased.

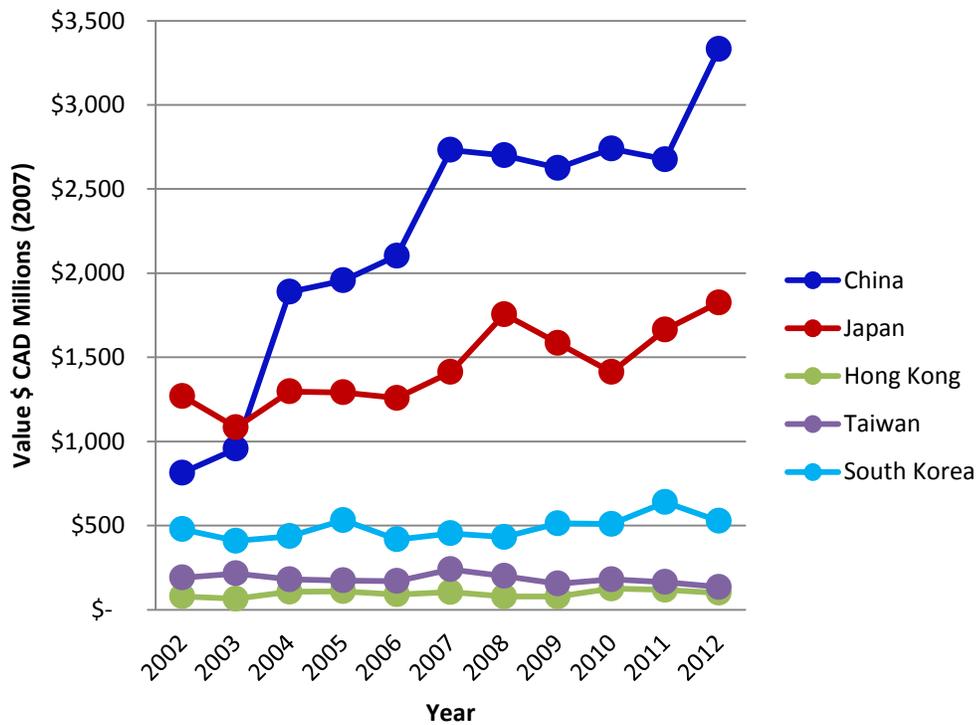
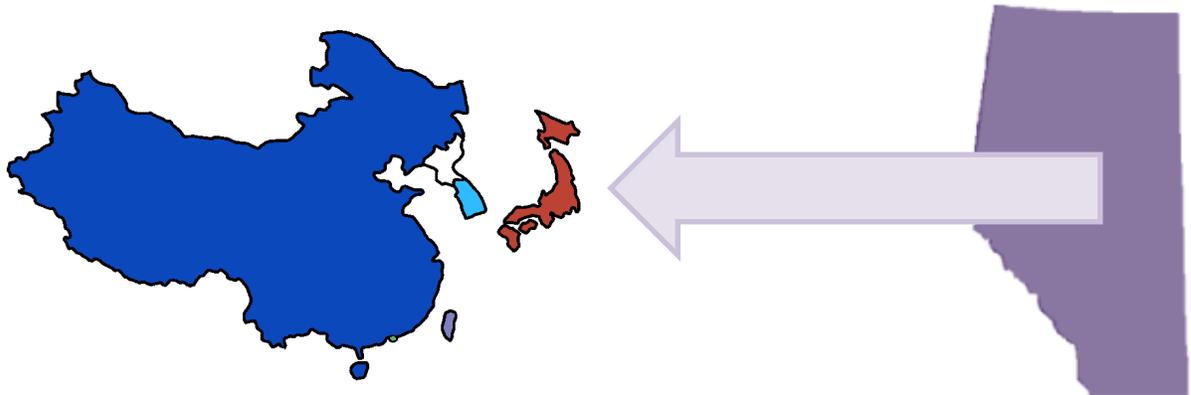
Imports from the United States by Intermodal (Rail & Marine), by Region of Origin



- The Central region of the United States was the most common region of origin for Alberta’s imports by intermodal. The 2012 value of Alberta’s intermodal imports from the Central region of the United States was 87.8% or \$918 million higher than the 2002 value.
- Alberta’s intermodal imports from the Southeast and West regions of the United States also experienced high levels of growth during this period, increasing 144% (or \$1 billion) and 337% (or \$523 million) above the 2002 values, respectively.

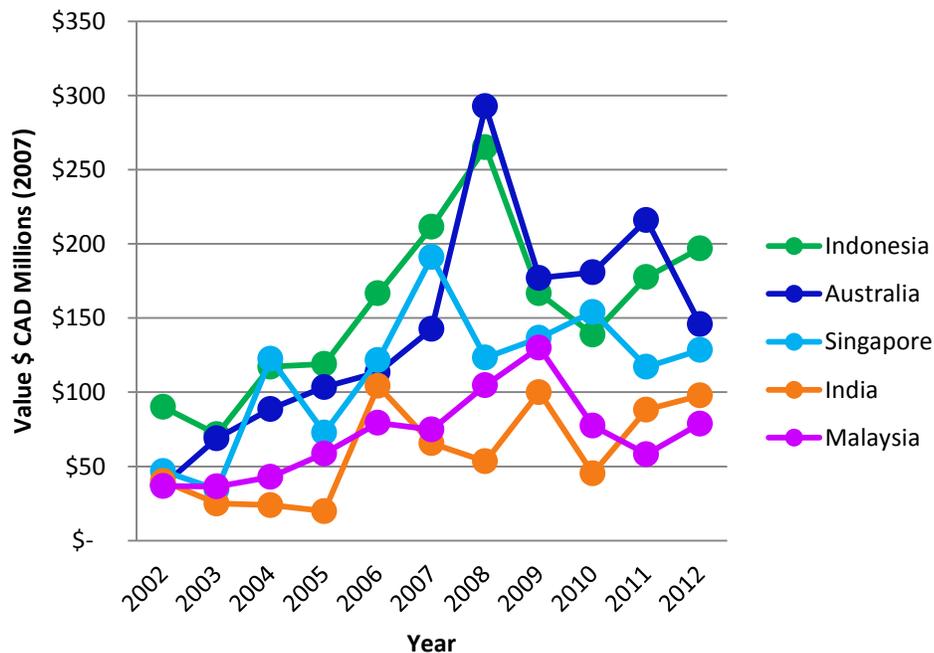
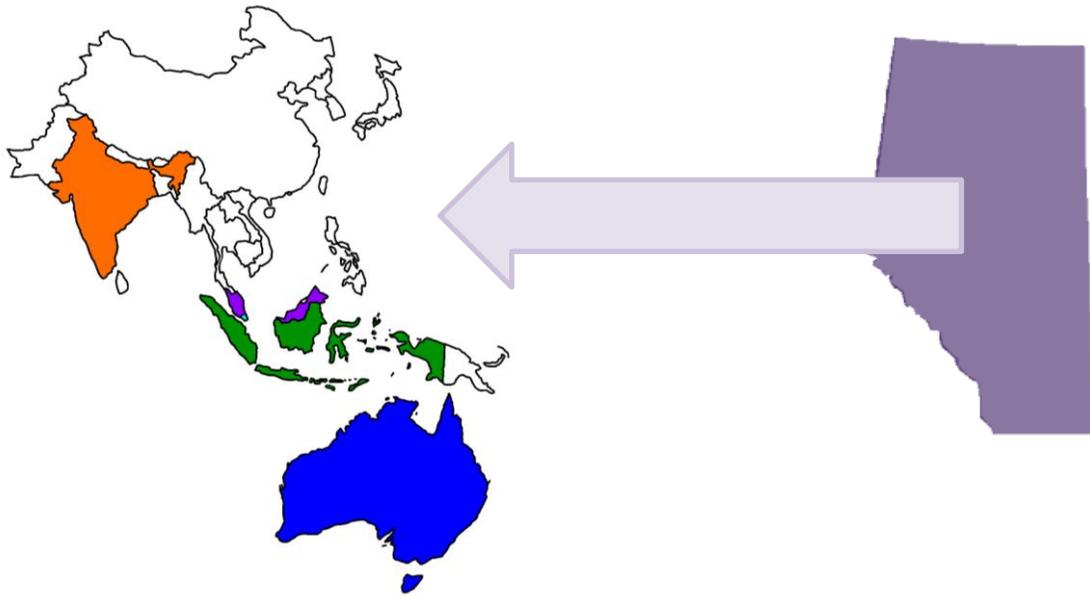
Trade with Oceania/Asia-Pacific Countries by Intermodal (Rail & Marine)

Exports to Northern Asia-Pacific Countries by Intermodal (Rail & Marine)



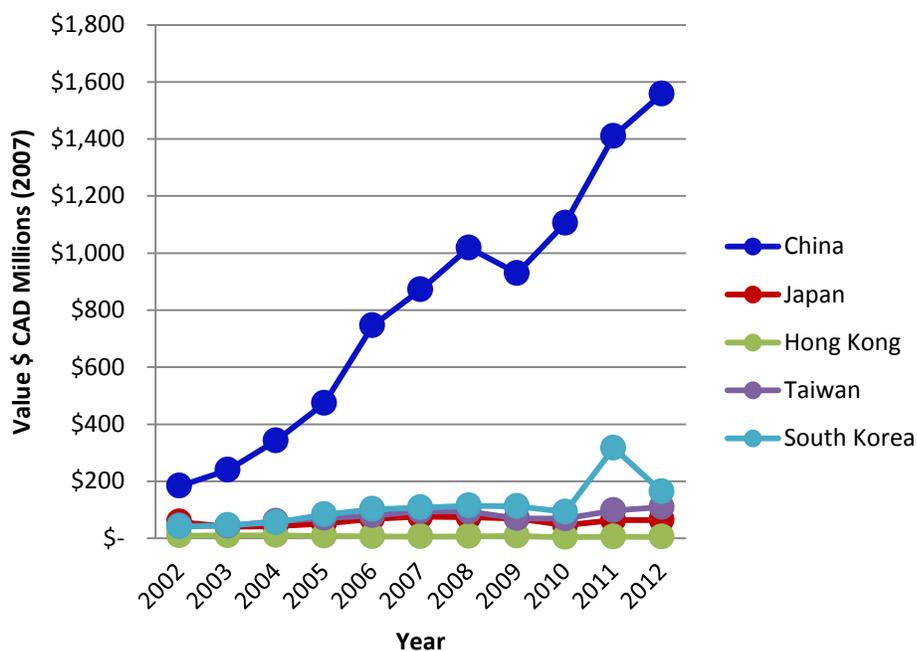
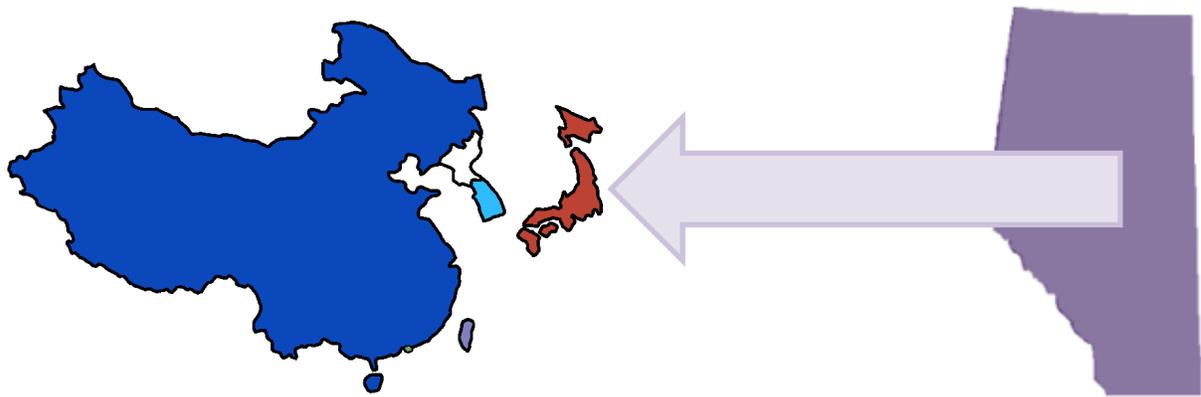
- The value of Alberta’s exports by intermodal to China, Japan, Hong Kong and South Korea all experienced growth from 2002 to 2012. The largest growth, by value, of Alberta’s exports by intermodal to the North Asia-Pacific during this period was to China, increasing over 300% or \$2.5 billion, and Japan, increasing 44% or \$555 million.
- Conversely, the value of Alberta’s exports by intermodal to Taiwan during this period declined by 29% or \$56 million.

Exports to Oceania/Southern Asia-Pacific Countries by Intermodal (Rail & Marine)



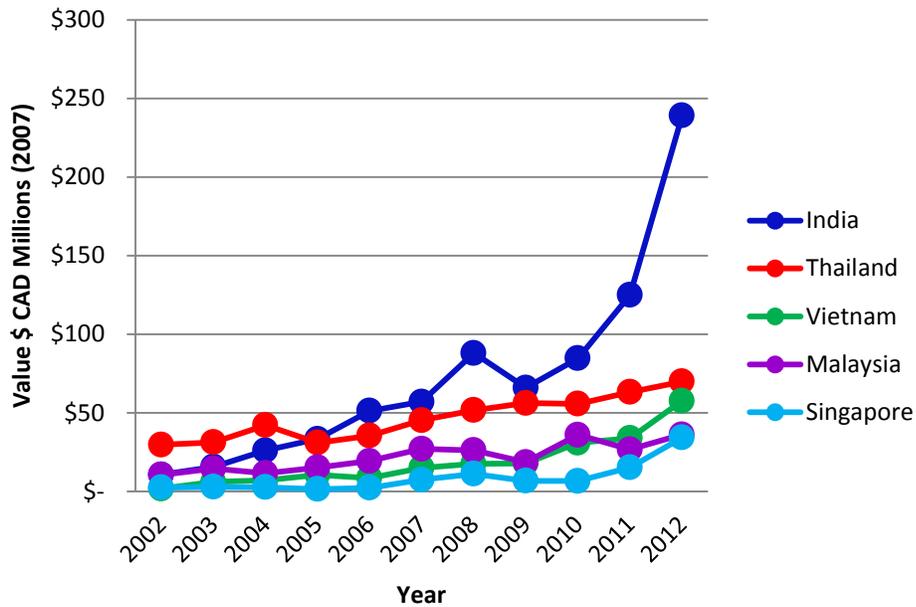
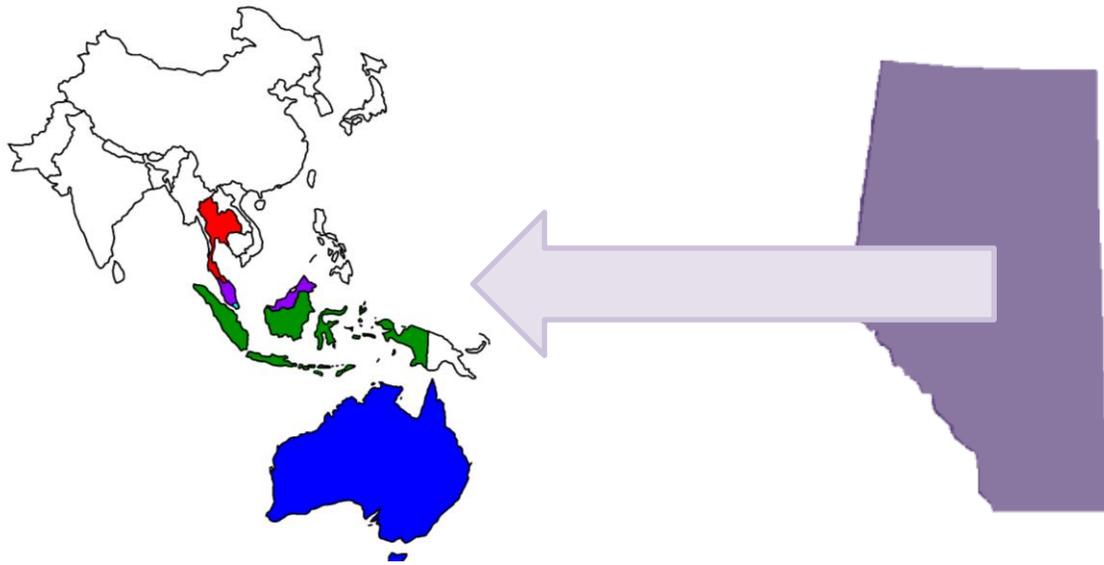
- Based on the value of Alberta’s exports by intermodal to five key Oceania/South Asia-Pacific destinations, all five countries experienced substantial growth over the period from 2002 to 2012; overall Australia experienced the largest growth, with the 2012 value exceeding the 2002 value by 290% or \$108 million.
- From 2002 to 2012, the value of Alberta’s exports by intermodal to Indonesia grew considerably, with the 2012 value exceeding the 2002 value by 119% or \$107 million. Alberta’s exports by intermodal to Indonesia surpassed those to Australia in 2012, for the first time since 2007.

Imports from Northern Asia-Pacific Countries by Intermodal (Rail & Marine)



- From 2002 to 2012, the value of Alberta’s imports by intermodal from China grew at an impressive rate, with the 2012 value exceeding the 2002 value by 750% or \$1.4 billion.
- From 2002 to 2012, the value of Alberta’s imports by intermodal from Japan, Taiwan and South Korea all trended upwards, while on the contrary, the value of Alberta’s imports by intermodal from Hong Kong declined over this period by nearly 50% or \$4.6 million.

Imports from Oceania/Southern Asia-Pacific Countries by Intermodal (Rail & Marine)

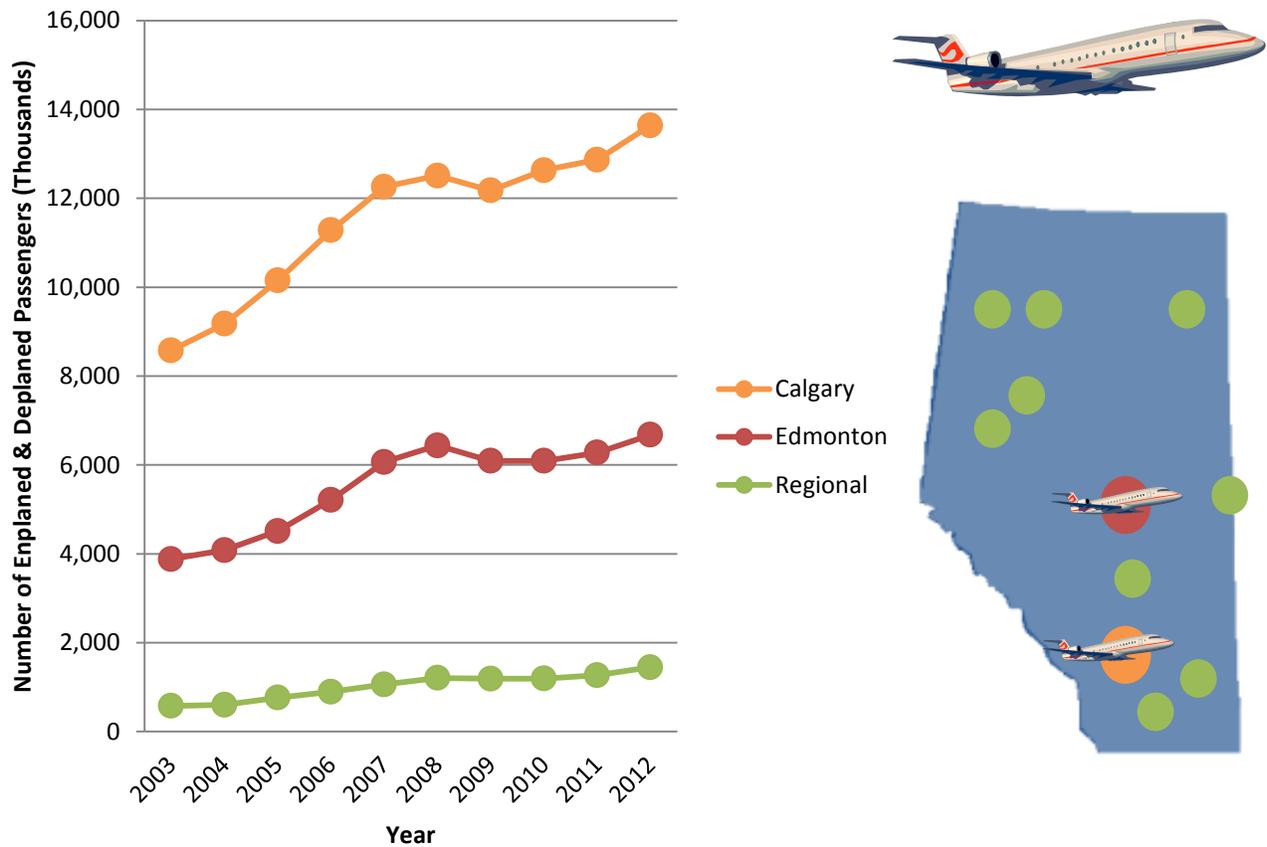


- Based on the value of Alberta's imports from the five key Oceania/South Asia-Pacific origins by intermodal, all five countries experienced substantial growth over the period from 2002 to 2012, with moderate to strong upward trends.
- By value, Alberta's imports by intermodal from India experienced the largest growth, with the 2012 value over 20 times greater than the 2002 value (or \$228 million).

Alberta Air Trade

Alberta's Airports - Enplaned & Deplaned Passengers

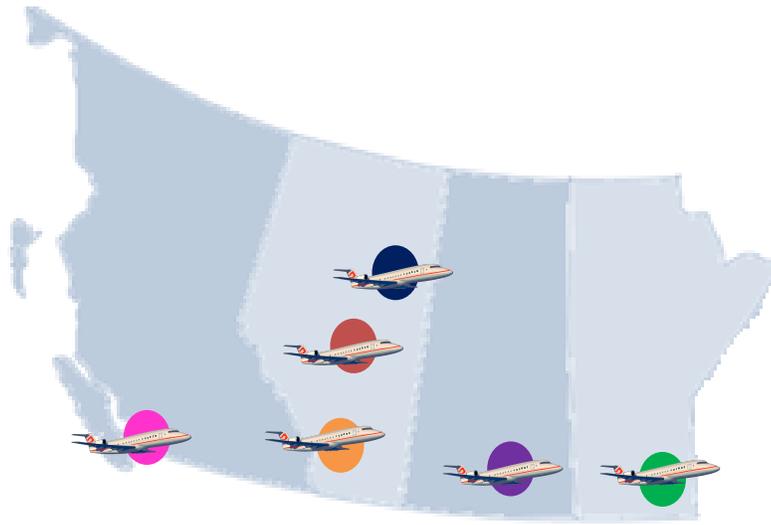
Alberta has the advantage of two main international airports, Calgary and Edmonton that connect passengers and cargo to and from smaller regional airports with larger economic centers. Alberta's small and large regional airports are part of an important network that forms a global supply chain system.



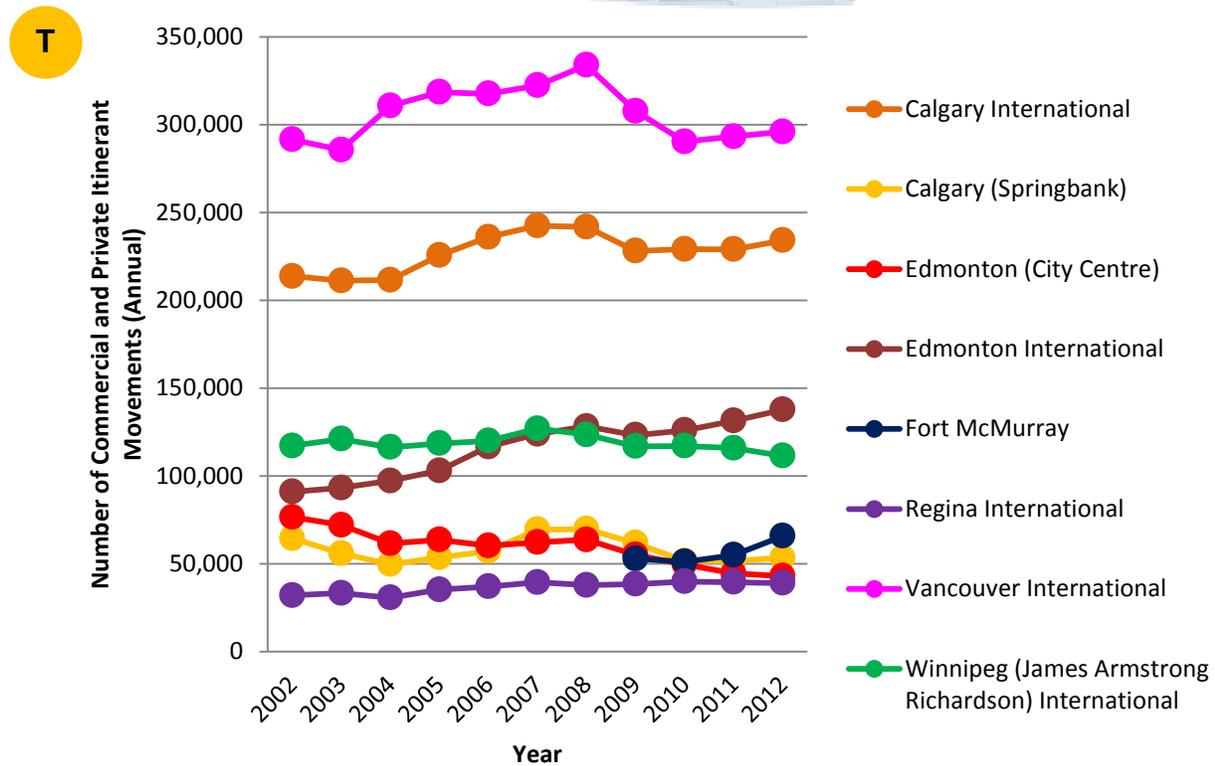
Source: Alberta Transportation

- Alberta's international and regional airports handled over 21 million passengers (enplaned or deplaned passengers) in 2012.
- Both the Calgary and Edmonton international airports have experienced significant growth in enplaned and deplaned passengers since 2003.

Number of Commercial and Private Itinerant Movements at Major Airports in Western Canada (Airports with NAV Canada Towers), Annual



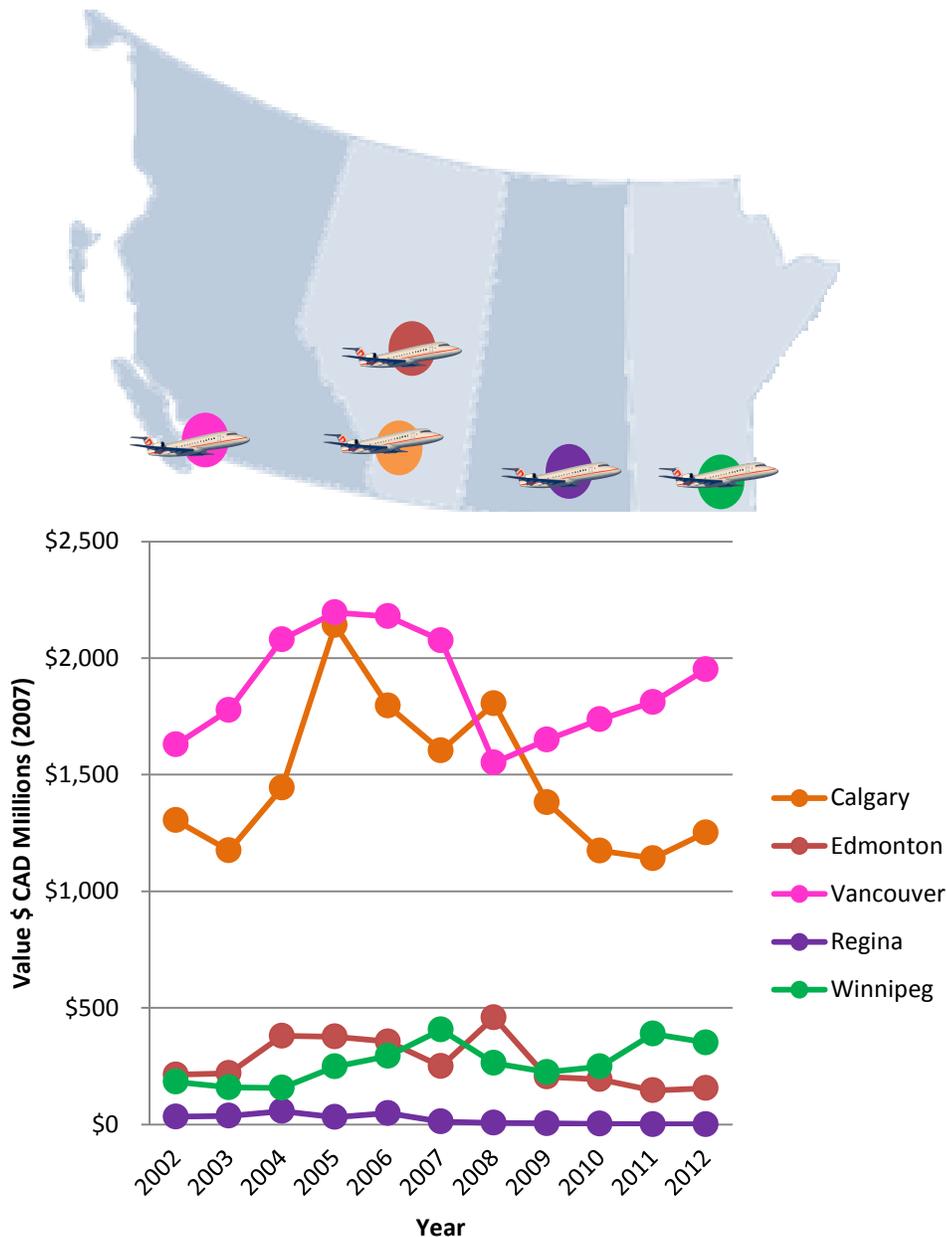
An *Itinerant Aircraft Movement* is an aircraft movement that arrives and departs from an air traffic control circuit.



Source: Statistics Canada CANSIM Table 401-0009

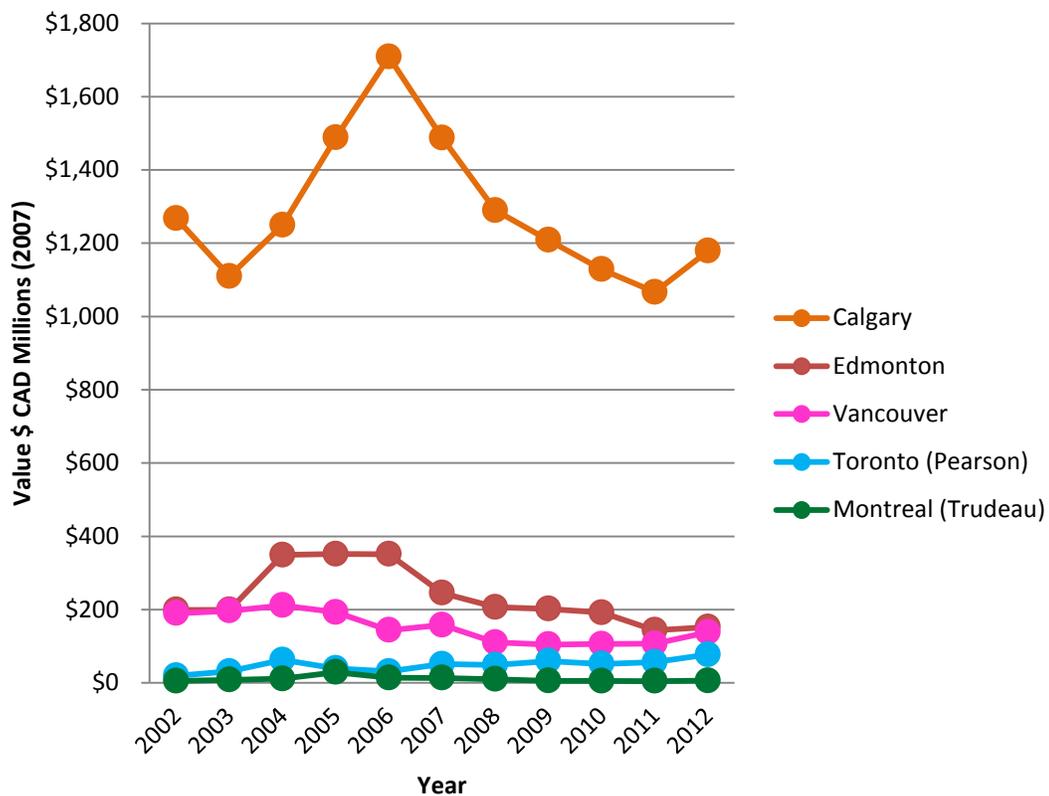
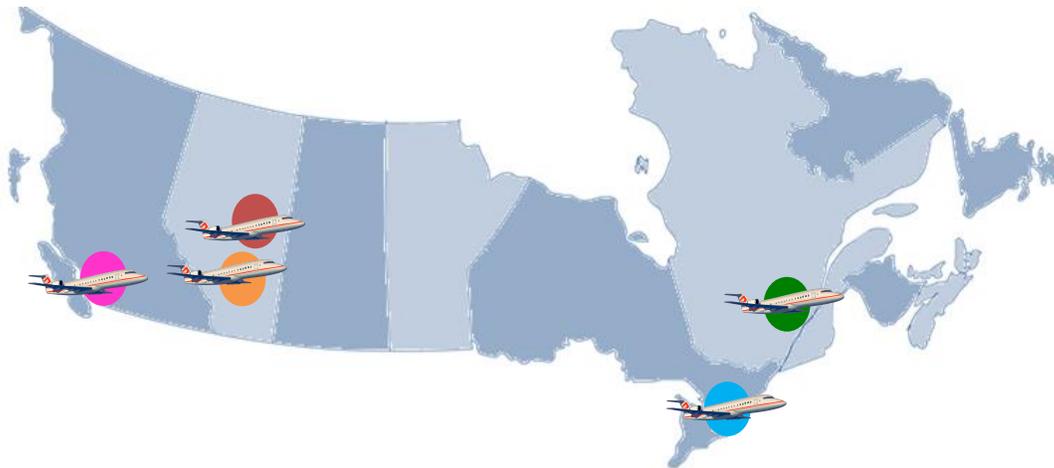
- Commercial and private itinerant movements at the Fort McMurray Airport surpassed those from Calgary Springbank Airport and Edmonton City Centre Airport in 2011 and 2012.
- Commercial and private itinerant movements at Edmonton International Airport show a clear upward trend, with movements surpassing those at the Winnipeg (James Armstrong Richardson) International Airport from 2008 through 2012.

Canadian Exports by Air at 5 Key Western Canada Airports



- By value, the top port of exit for Canada’s exports by air in Western Canada is the Vancouver International Airport, followed by the Calgary International Airport.
- Air exports through the Edmonton International Airport during this period peaked in 2008 before declining, reaching the lowest value of the period in 2011. Exports from the Calgary International Airport during this period peaked in 2005 before declining, reaching the lowest value of the period in 2011.

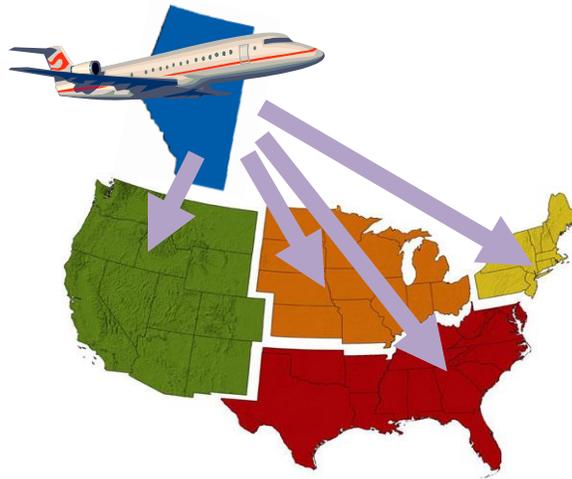
Alberta Exports by Air – Top 5 Ports of Exit



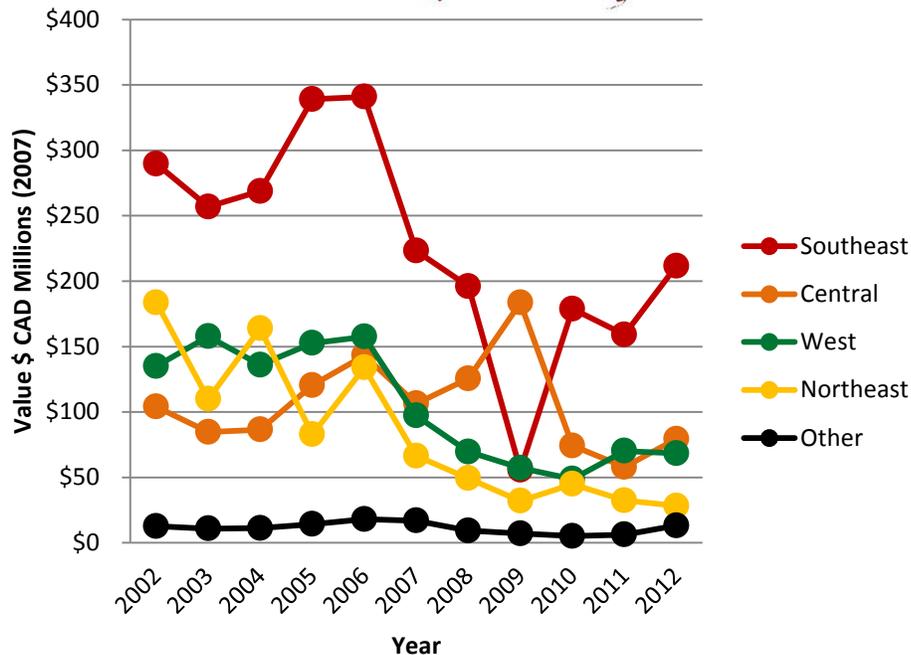
- Alberta's total exports by air through the Calgary and Edmonton International Airports declined from 2006 to 2011 before recovering slightly in 2012.
- Alberta's total exports by air through the Vancouver International Airport peaked in 2004 and declined until 2009, before rebounding slightly through 2012. In 2012, the value of Alberta's exports by air through the Vancouver International Airport still remained below the values seen from 2002 through 2007.

Trade with the United States by Air

Exports to the United States by Air, by Region of Destination



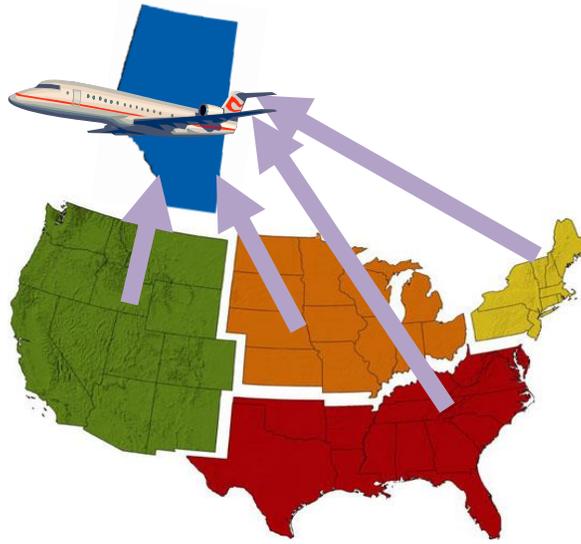
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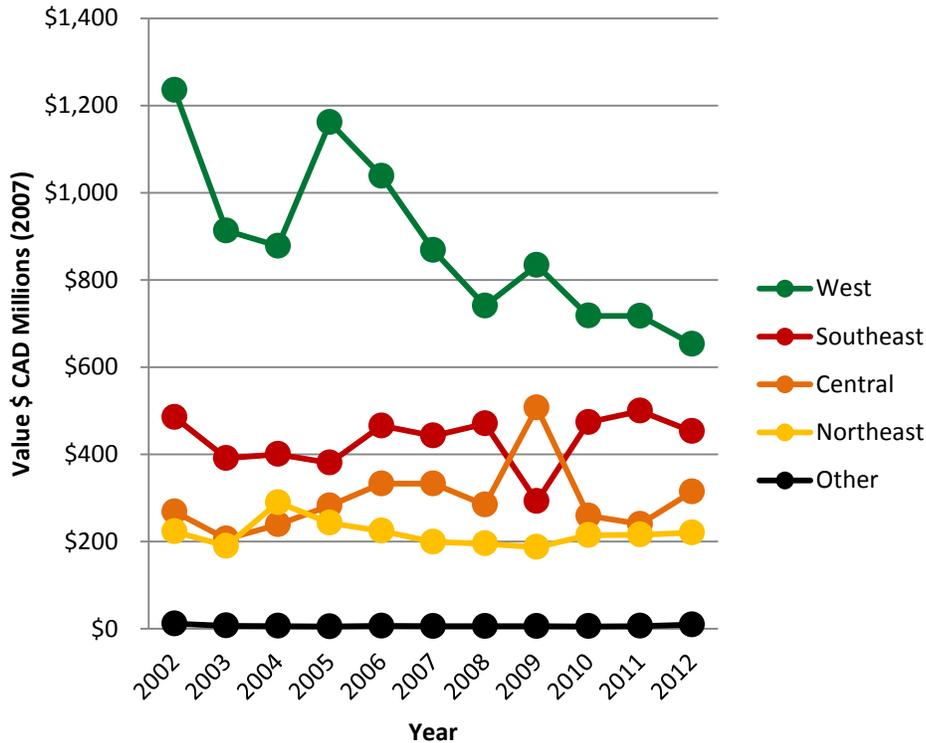
- From 2002 to 2012, the value of Alberta's exports by air to the United States has declined for all regions of destination, with the exception of the Other region, which has remained relatively constant.
- During this period, by value, the decline of Alberta's exports by air to the Northeast region of the United States was the most apparent (85% or \$155 million), followed by the Southeast region (27% or \$78 million), the West region (50% or \$67 million), and the Central region (24% or \$25 million).

Note: The *Other* region of the United States includes Alaska, Hawaii, Puerto Rico, and the United States Virgin Islands.

Imports from the United States by Air, by Region of Origin



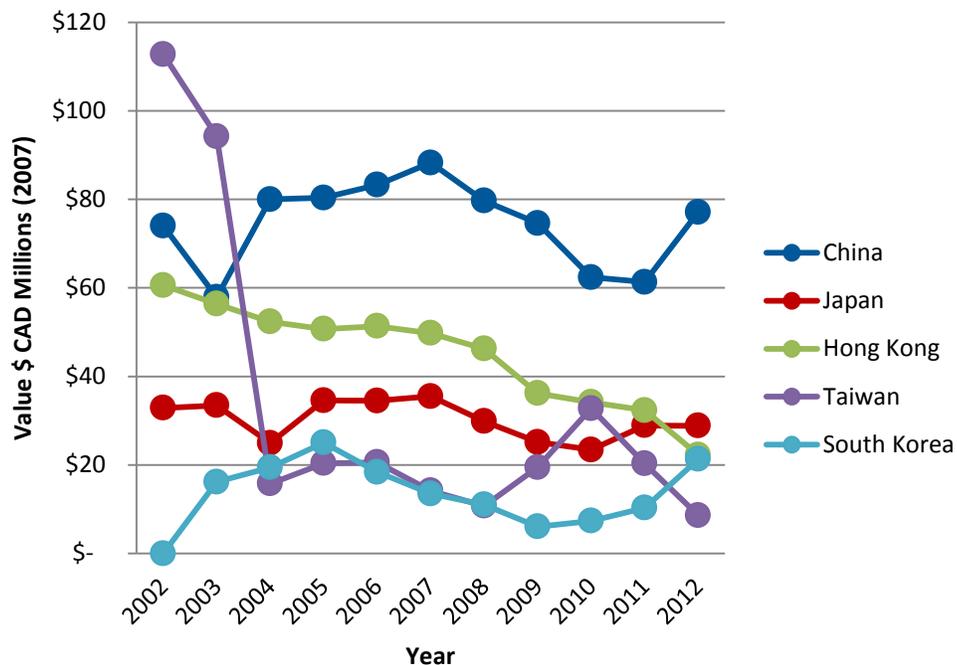
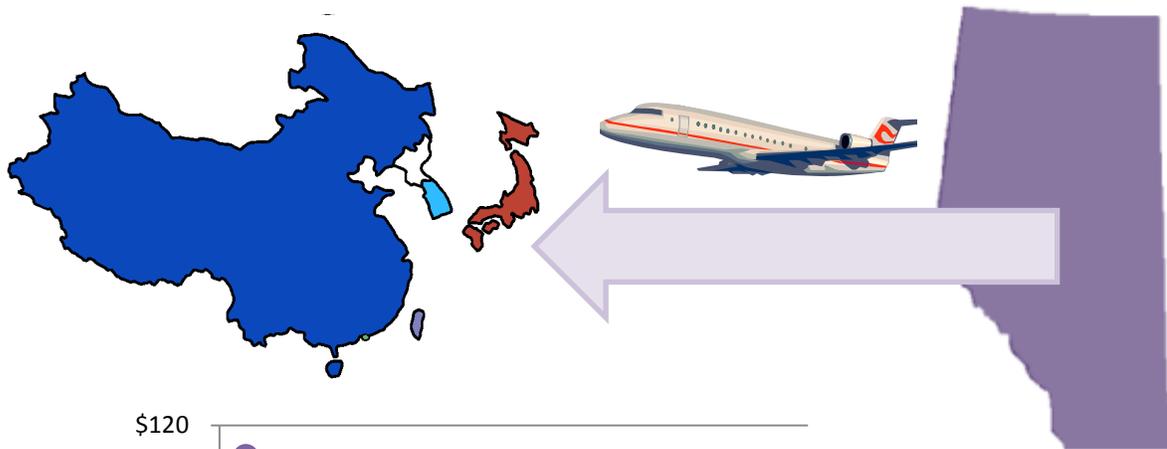
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- The value of Alberta’s imports by air from the Central region of the United States increased 17% or \$46 million from 2002 to 2012.
- During this period, Alberta’s imports by air from the West region of the United States declined 47% or \$582 million, while Alberta’s imports by air from the Northeast, Southeast and Other regions either slightly declined or remained relatively constant during this period.

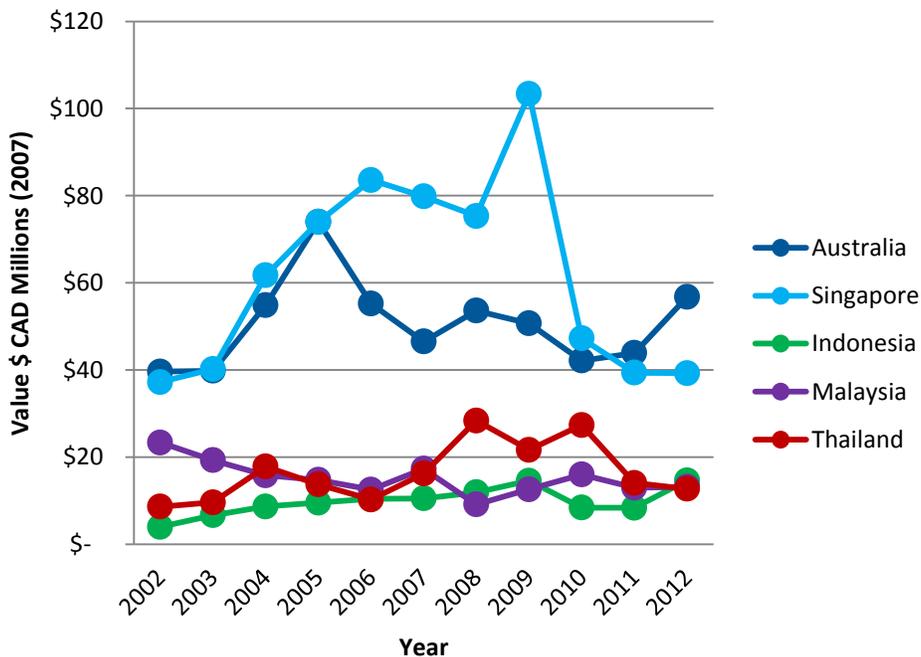
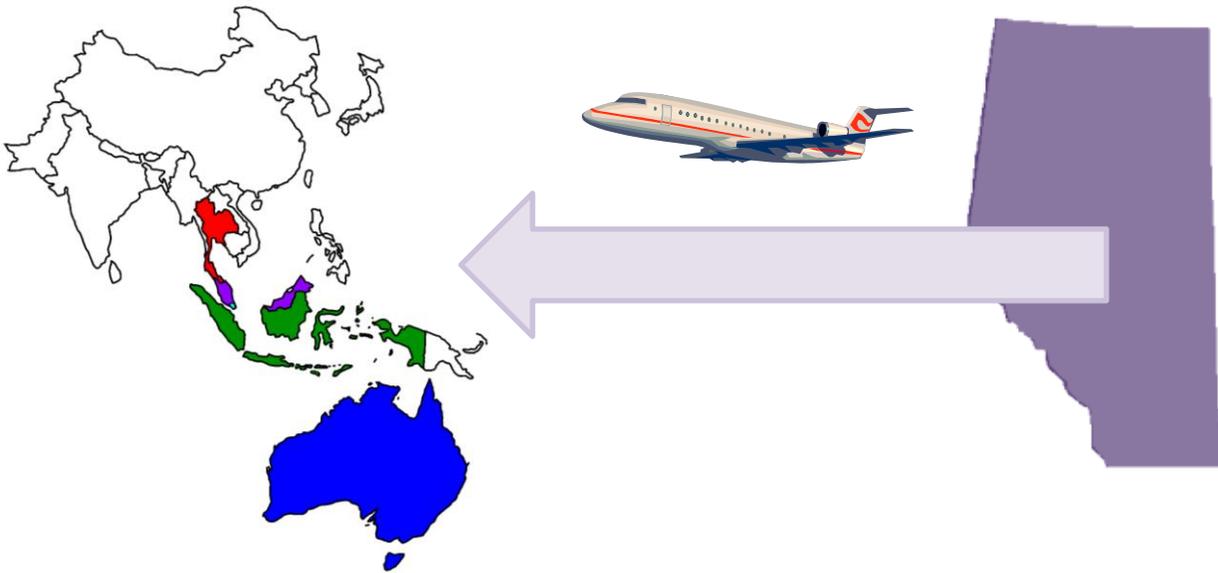
Trade with the Oceania/Asia-Pacific Countries by Air

Exports to Northern Asia-Pacific Countries by Air



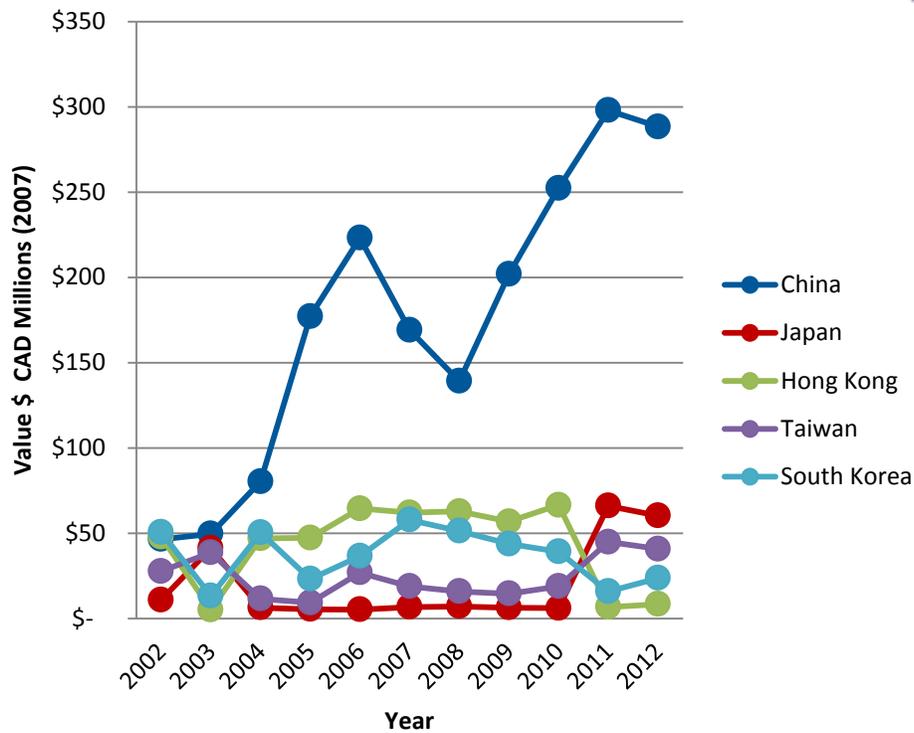
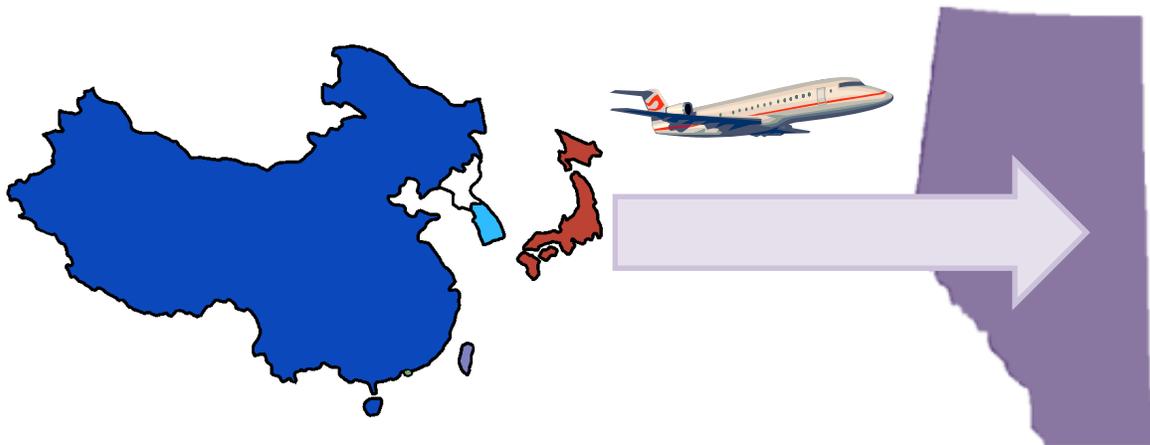
- From 2002 to 2012, the value of Alberta's exports by air to the Northern Asia-Pacific countries of Hong Kong and Taiwan reflect clear downward trends, declining 63% or \$38 million and 92% or \$104 million, respectively.
- During this period, the value of Alberta's exports by air to China peaked in 2007, before declining through 2011 and rebounding slightly in 2012. Similarly, the value of Alberta's air exports to Japan also peaked in 2007 before trending downwards through 2012.
- During this period, the value of Alberta's exports by air to South Korea peaked in 2005, declined through 2009, and rebounded from 2009 to 2012.

Exports to Oceania/Southern Asia-Pacific Countries by Air



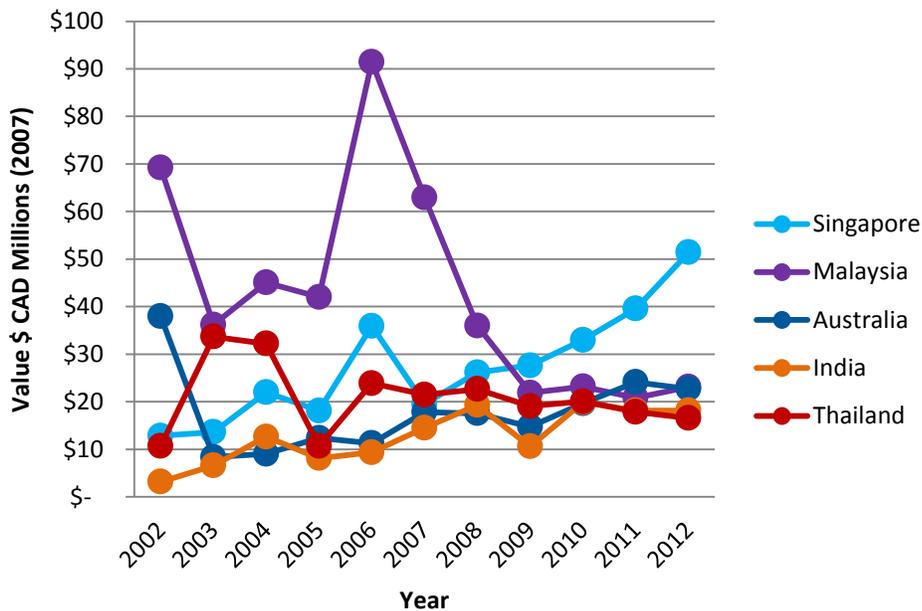
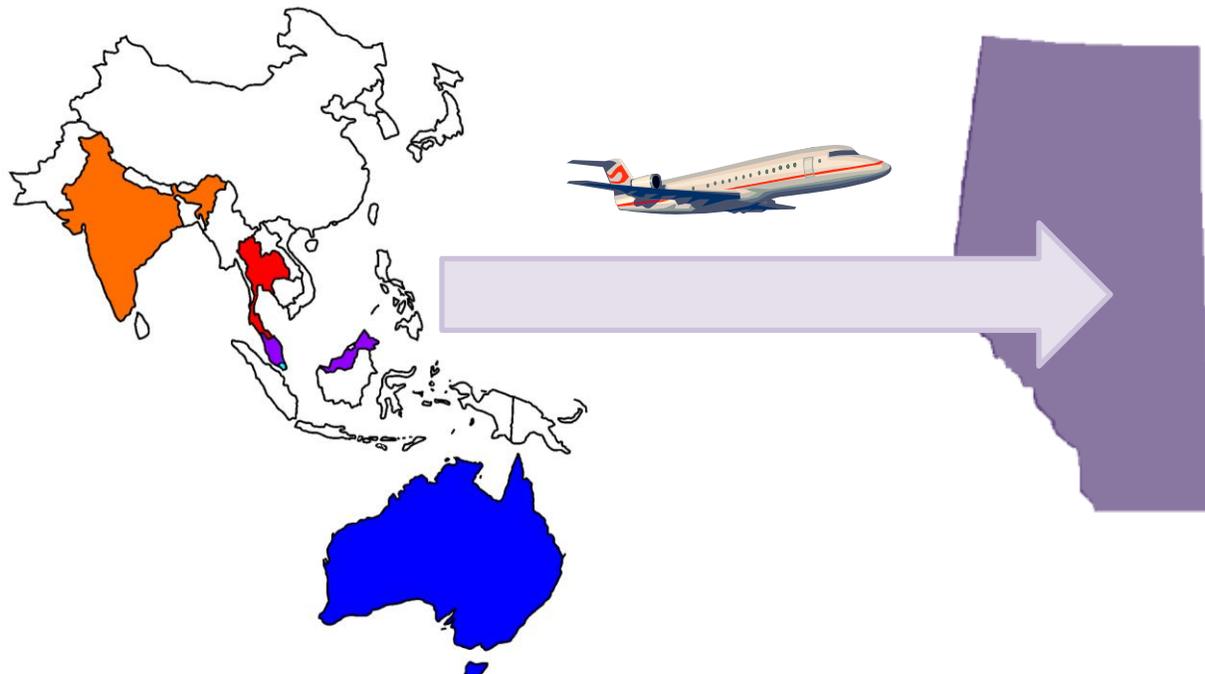
- During this period, the value of Alberta's exports by air to Singapore peaked in 2009 before declining dramatically through 2012, ending this period just above 2002 levels.
- The value of Alberta's exports by air to Indonesia more than doubled over this period, growing over \$10 million, while Alberta's exports by air to Malaysia declined by nearly the same amount during this time.

Imports from Northern Asia-Pacific Countries by Air



- From 2002 to 2012, the value of Alberta’s imports by air from the Northern Asia-Pacific countries of China and Japan experienced substantial growth, increasing 521% or \$242 million and 453% or \$49 million, respectively.
- During this period, the value of Alberta’s imports from Hong Kong by air peaked in 2010 before declining dramatically through 2012. Similarly, the value of Alberta’s imports from South Korea by air declined over this period by 53% or \$27 million.

Imports from Oceania/Southern Asia-Pacific Countries by Air



- During this period, the value of Alberta’s imports by air from Malaysia peaked in 2006 before they declined dramatically through 2012. Conversely, the value of Alberta’s imports from Singapore and India exhibit clear upward trends over this period, increasing 300% or \$39 million and 470% or \$6 million, respectively.
- From 2002 to 2012, by value, Alberta’s imports from Australia by air declined dramatically in 2003 then trended steadily upwards through 2012.

Alberta Truck Trade

Alberta's truck trade follows a substantial network of over 31,000 km of provincial highway infrastructure that facilitates the movement of goods. This extensive network includes the following infrastructure⁵:

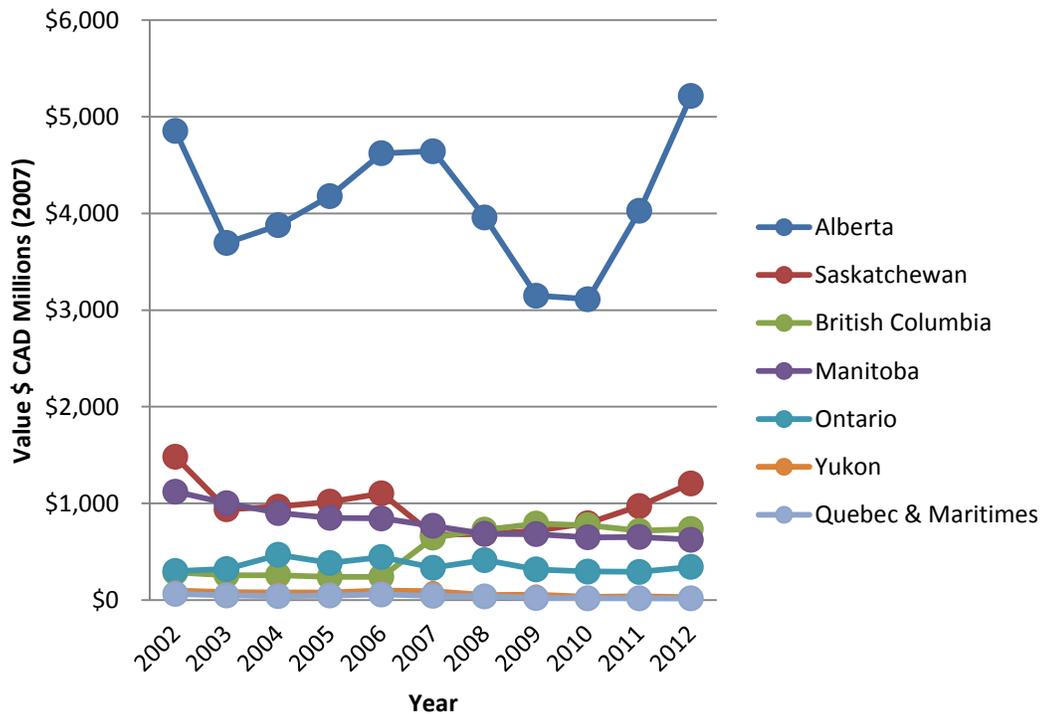
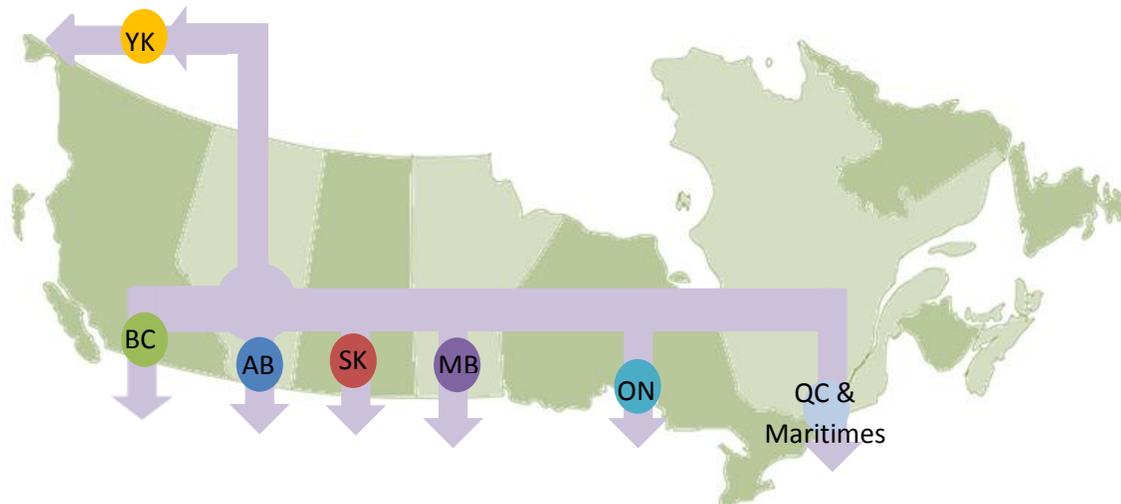
- 4,050 bridge structures (including culverts)
- 27,272 km of paved provincial highways (2,386 km of four and six lane divided highways)
- 3,746 km gravel provincial highways

Alberta also maintains an advanced network of High Load Corridors that facilitate the movement of oversize loads by permit. This is an important network for industry development in Alberta's northern communities. Over 185,000 permits for oversize loads were issued in Alberta in the 2010-2011 fiscal year.

⁵ Source: Alberta Transportation 2011 Stats and Facts

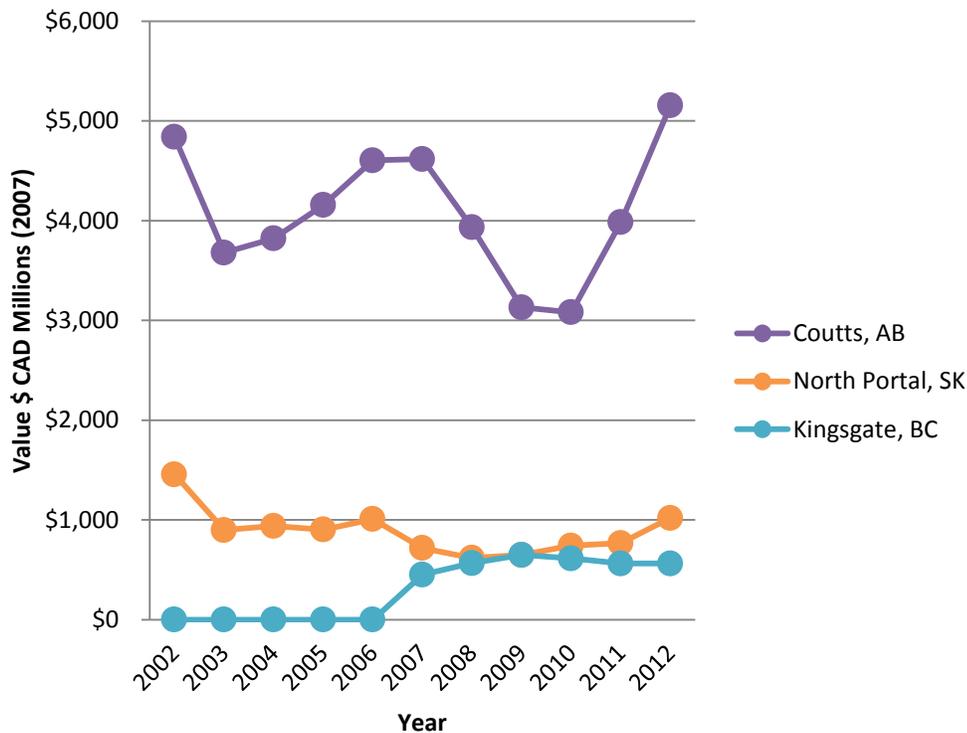
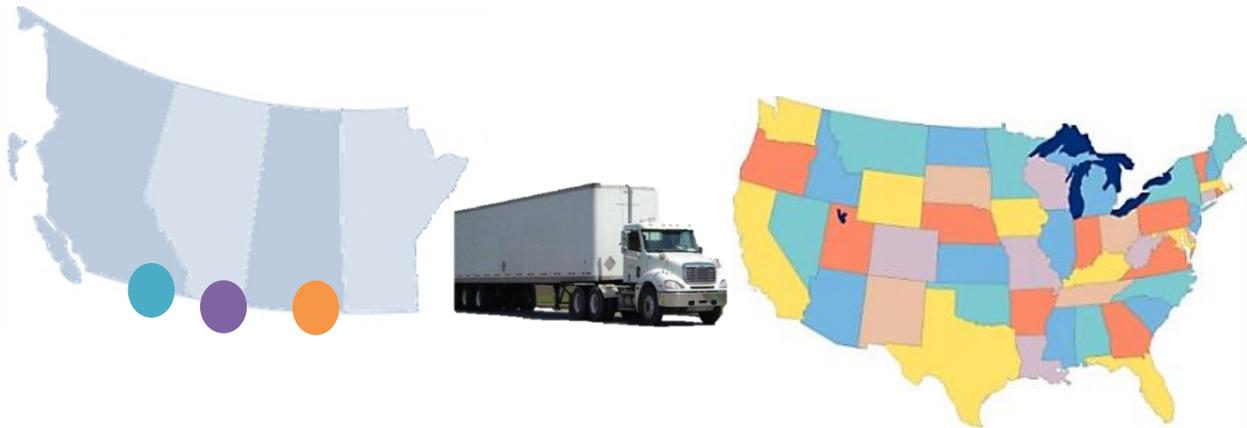
Trade with the United States by Road

Exports to the United States by Road, by Provincial Gateways



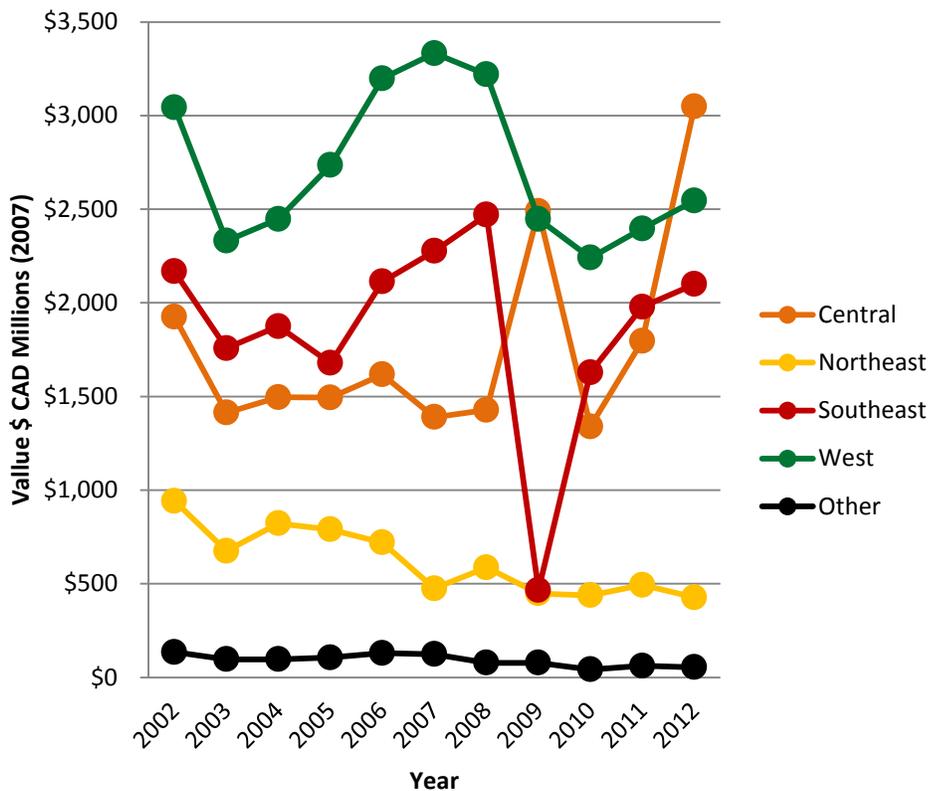
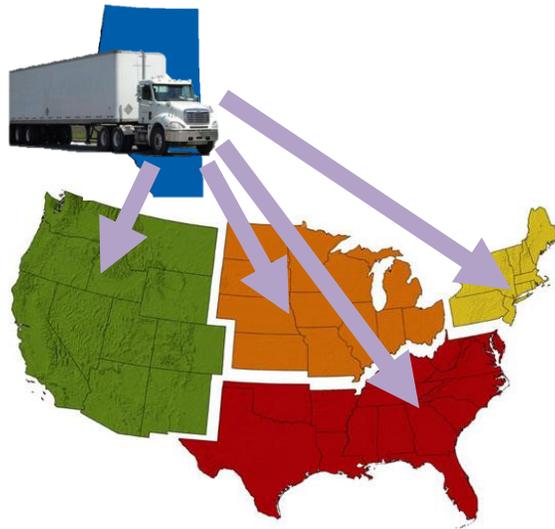
- Alberta's exports by road travel on a number of different corridors before reaching their intended destinations. Alberta's exports that exit through Manitoba gateways have declined steadily over this period, exhibiting an overall decline of 44% or \$490 million and Alberta exports through Saskatchewan gateways declined until 2007 before rebounding through 2012.
- During this period, the value of Alberta's exports through British Columbia gateways increased by 141% or \$459 million.

Exports to the United States by Road - Key Ports of Exit



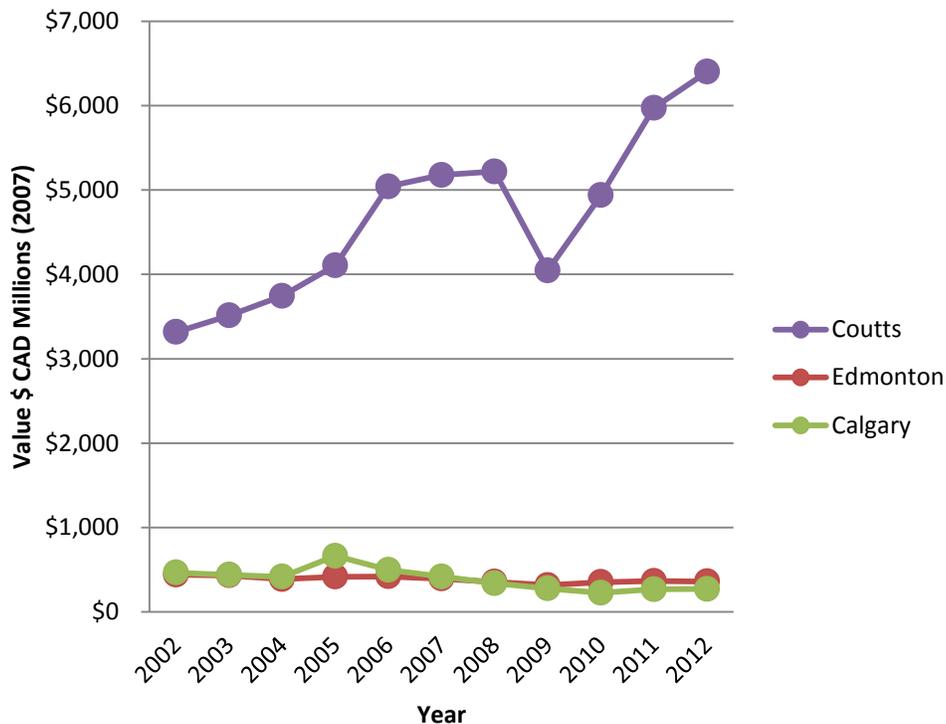
- By value, Alberta’s exports by road through the Coutts, Alberta border crossing declined in 2008 through 2010 and increased in 2011 and 2012. Over this period, 2012 marked the highest value of Alberta’s exports through the Coutts border crossing.
- During this period the value of Alberta’s exports through the North Portal, Saskatchewan border crossing declined in 2008 before recovering slightly through 2012.
- By value, Alberta’s exports through Kingsgate, British Columbia border crossing increased in 2007 and have remained relatively constant from 2008 through 2012.

Exports to the United States by Road, by Region of Destination



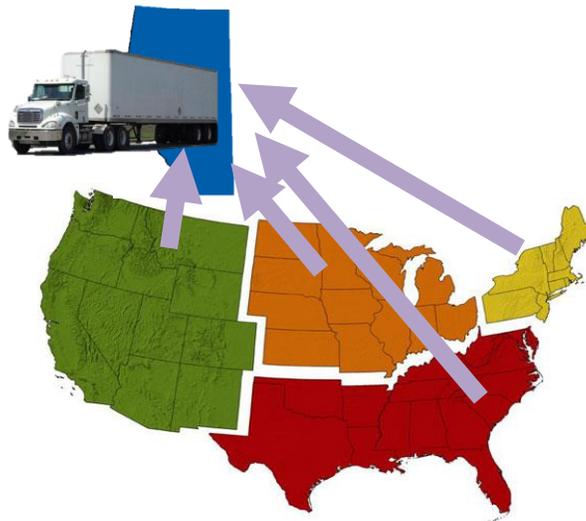
- Alberta's exports by road to the Central, Southeast and West regions of the United States increased substantially between 2010 and 2012.
- Alberta's exports by road to the Northeast region of the United States declined steadily from 2002 to 2012, with the 2012 value 55% or \$515 million below the 2002 value.

Imports from the United States by Road - Key Ports of Clearance

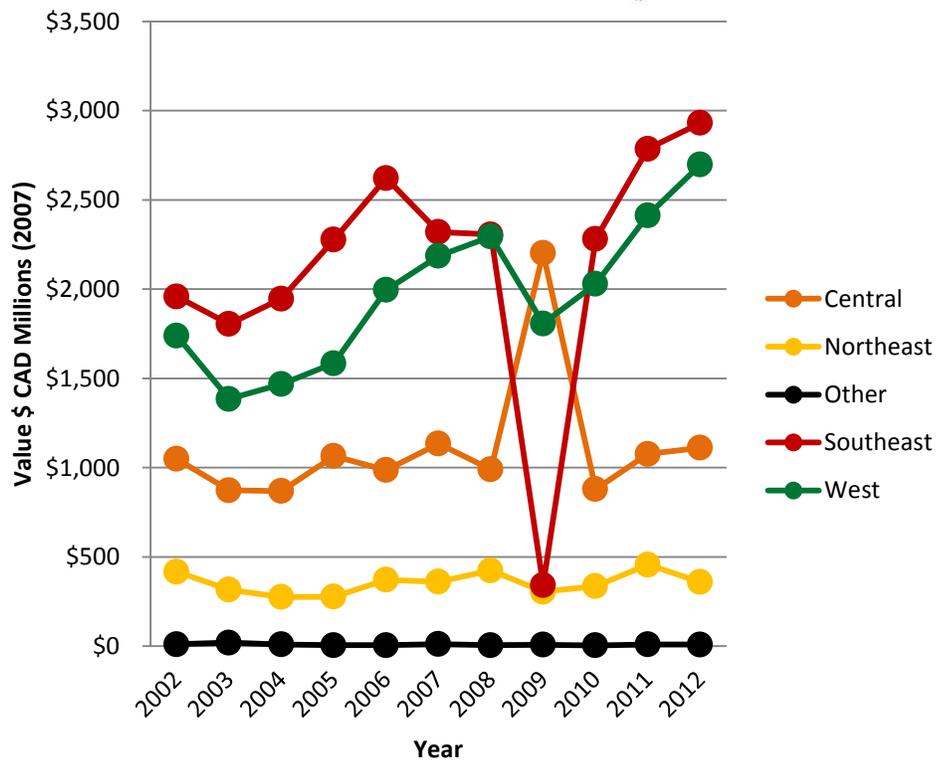


- Alberta imports from the United States by road through the Coutts, Alberta port of clearance increased by 93% or \$3.1 billion during this period. Imports from the United States through the ports of clearance of Edmonton and Calgary have declined by 19% or \$82 million and 41% or \$193 million during this period, respectively.

Imports from the United States by Road, by Region of Origin



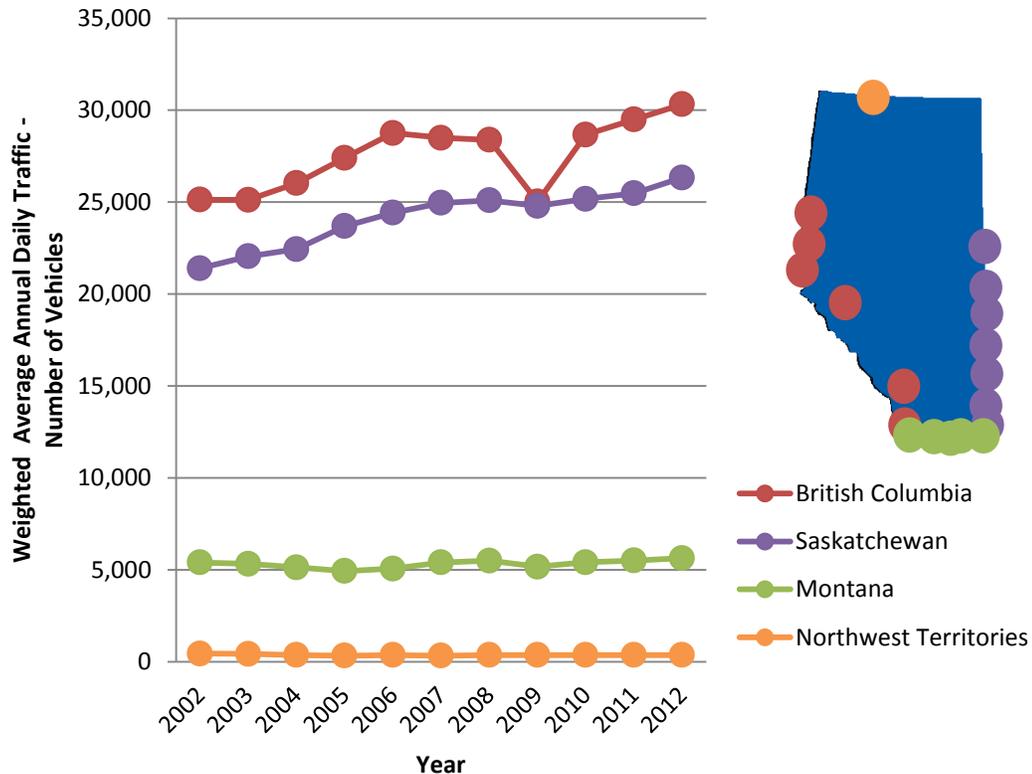
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- During this period, Alberta’s imports by road from the West and Southeast regions of the United States peaked in 2012, increasing by 55% or \$958 million and 50% or \$972 million in 2012 over 2002 values, respectively.
- Alberta imports by road from the Northeast region of the United States declined in value by 14% or \$58 million over this period.

Alberta Traffic Volumes

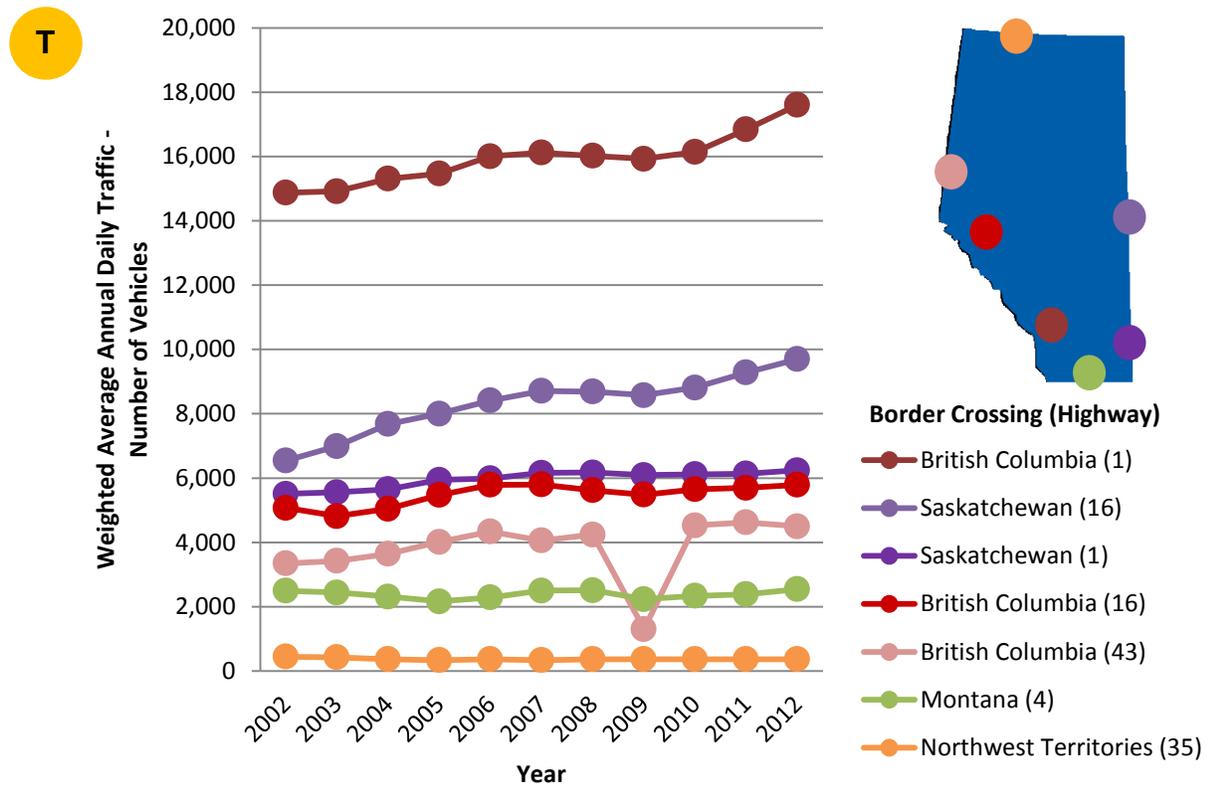
Traffic Volumes Approaching Alberta's Border Crossings, all Vehicle Types



Source: Alberta Transportation - Weighted Average Annual Daily Traffic: The average daily two-way traffic volume for a section of highway expressed as vehicles per day

- Traffic along the sections of highways that approach the Alberta-Saskatchewan border crossings have increased steadily from 2002 to 2012, with 2012 traffic 23% higher than 2002 traffic. The top three provincial crossings, by volume, along the Alberta-Saskatchewan border sections of highways are Highways 16, 1, and 55.
- Similarly, traffic volumes along the section of highway that approach the Alberta-British Columbia border crossings have also increased from 2002 to 2012, with 2012 volumes 20% higher than 2002 traffic. The top three provincial crossings, by volume, along the Alberta-British Columbia border sections of highways are Highways 1, 16, and 43.
- Traffic volumes along the sections of highway that lead to the Alberta-Northwest Territories and Alberta-Montana border crossings have remained relatively constant from 2002 to 2012.

Traffic Volumes Approaching Key Alberta Border Crossings, all Vehicle Types



Source: Alberta Transportation - Weighted Average Annual Daily Traffic: The average daily two-way traffic volume for a section of highway expressed as vehicles per day

- Traffic along the section of highway approaching the Alberta – British Columbia border crossing at Highway 1 experienced the highest weighted average annual daily traffic, with an estimated 17,604 vehicles a day in 2012.
- Traffic along the section of highway approaching the Alberta-Saskatchewan border crossing at Highway 16 experienced the second highest volume from 2002 to 2012, reaching an estimated 9,700 vehicles a day in 2012.
- Traffic along the section of highway approaching the Alberta-British Columbia border crossing at Highway 43 declined in 2009 before bouncing back in 2010, likely due to the recession. Other lanes experienced similar declines in 2009 volume; however this lane encountered the most dramatic swing.

Estimated Traffic Volumes on Key Alberta Corridors, by Section of Highway

Estimated Traffic Volumes (2012) on Key Alberta Corridors, all Vehicle Types

Alberta-British Columbia (Highway 43)

Alberta-British Columbia (Highway 16)

Alberta-Saskatchewan (Highway 16)

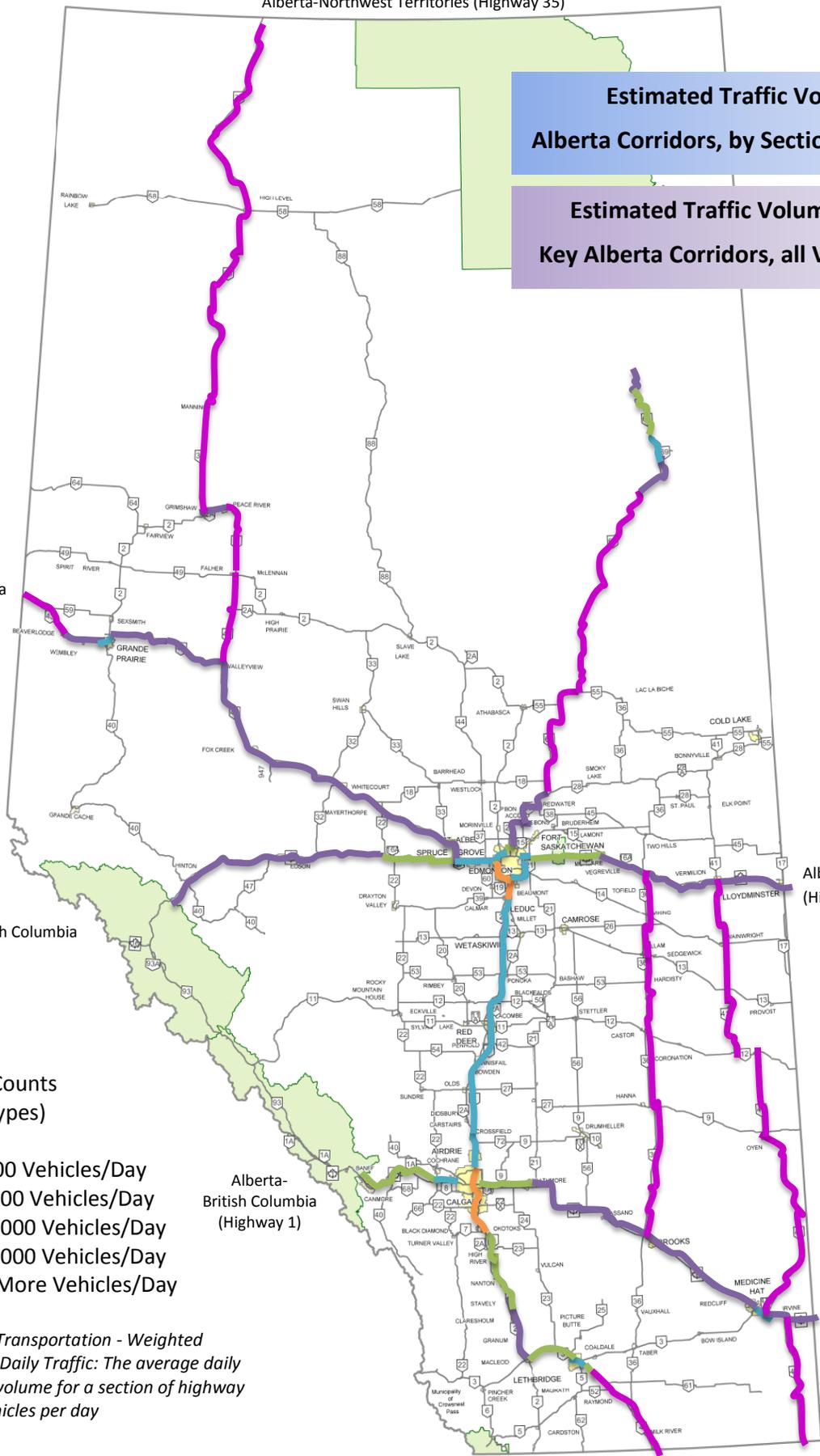
2012 Traffic Counts (All Vehicle Types)

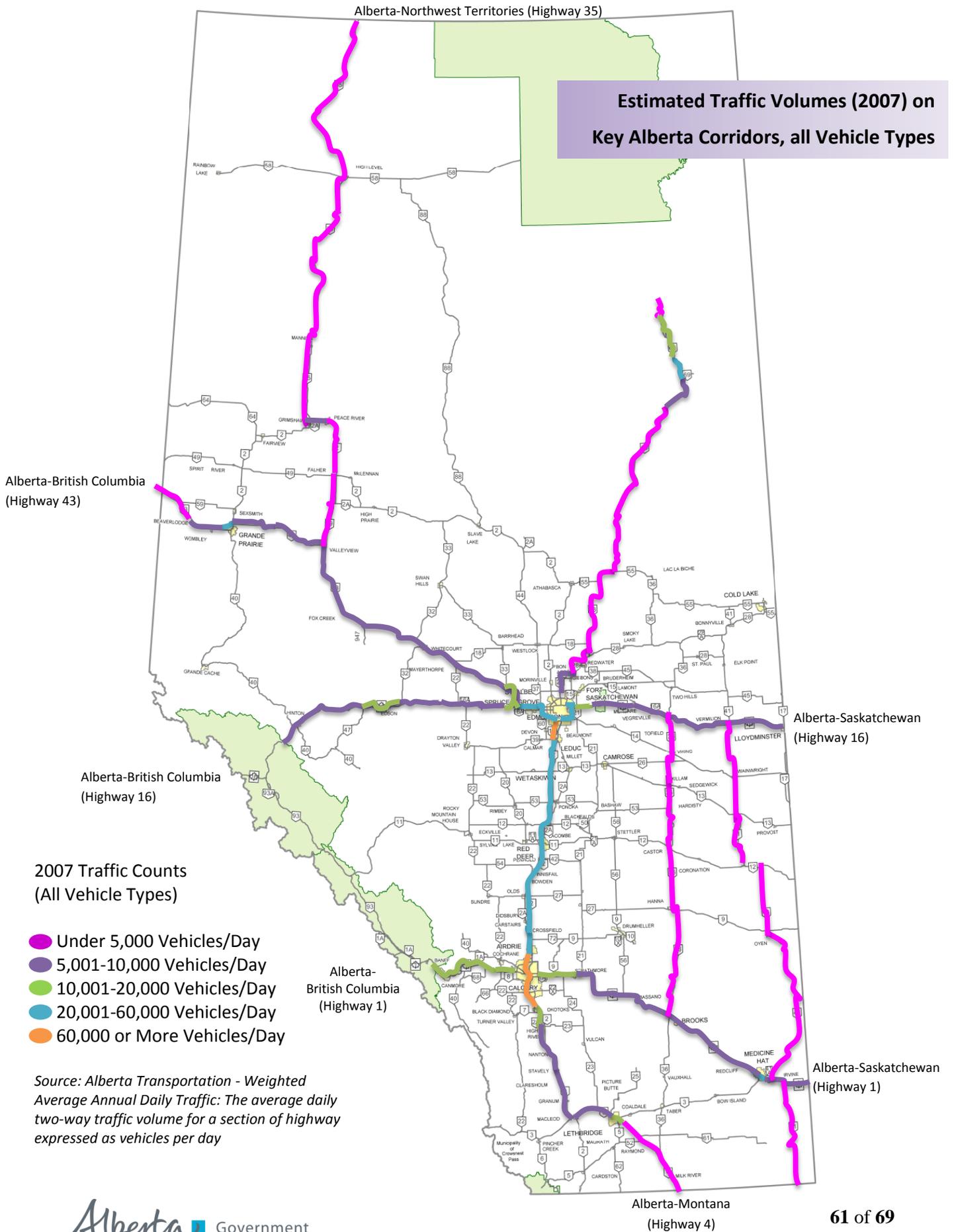
- Under 5,000 Vehicles/Day
- 5,001-10,000 Vehicles/Day
- 10,001-20,000 Vehicles/Day
- 20,001-60,000 Vehicles/Day
- 60,000 or More Vehicles/Day

Alberta-British Columbia (Highway 1)

Alberta-Saskatchewan (Highway 1)

Source: Alberta Transportation - Weighted Average Annual Daily Traffic: The average daily two-way traffic volume for a section of highway expressed as vehicles per day





Estimated Traffic Volumes (2002) on Key Alberta Corridors, all Vehicle Types

Alberta-British Columbia
(Highway 43)

Alberta-British Columbia
(Highway 16)

Alberta-Saskatchewan
(Highway 16)

2002 Traffic Counts
(All Vehicle Types)

- Under 5,000 Vehicles/Day
- 5,001-10,000 Vehicles/Day
- 10,001-20,000 Vehicles/Day
- 20,001-60,000 Vehicles/Day
- 60,000 or More Vehicles/Day

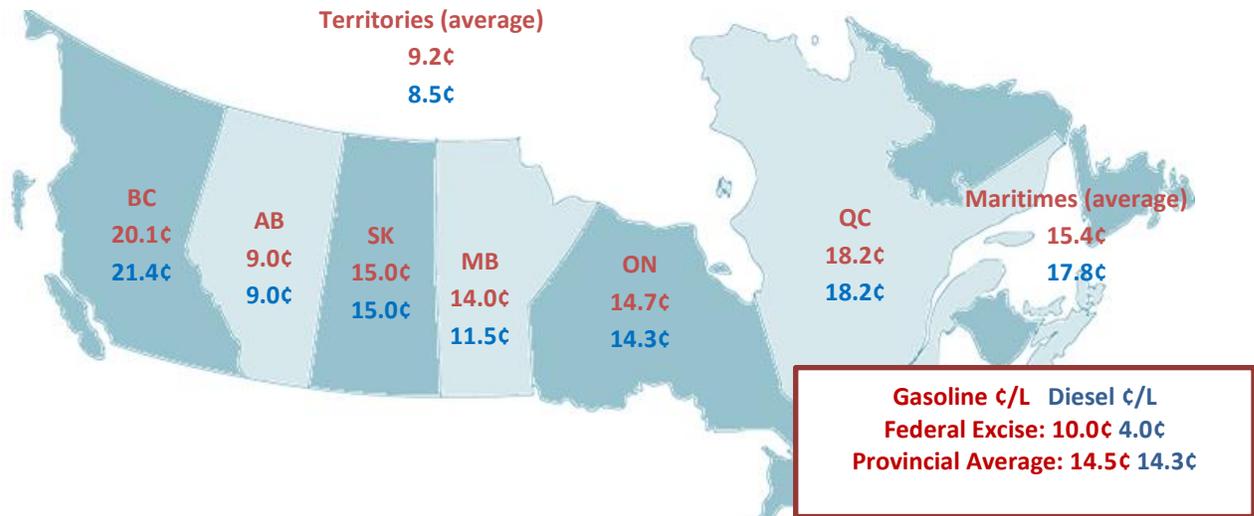
Alberta-British Columbia
(Highway 1)

Alberta-Saskatchewan
(Highway 1)

Source: Alberta Transportation - Weighted Average Annual Daily Traffic: The average daily two-way traffic volume for a section of highway expressed as vehicles per day

Transportation Regulatory Environment

2012 Federal and Provincial Taxes on Gasoline and Diesel



Note: The provincial taxes on gasoline for BC include municipal tax and carbon tax.

- Highway users contribute to the maintenance and construction of the highway system through fuel taxes, licence fees and permits collected by the federal and provincial governments. Alberta Government expenditures on transportation exceed the revenue it directly collects.
- Alberta has the lowest provincial unleaded regular gasoline and diesel taxes; in 2012 values, they were 5.5¢/L and 5.3¢/L below the provincial averages, respectively.
- There was no change in federal taxes on gasoline or diesel from 2002 to 2012; increases in provincial taxes on gasoline and diesel during this period occurred in British Columbia, Manitoba, Quebec, Nova Scotia, Prince Edward Island, and New Brunswick.

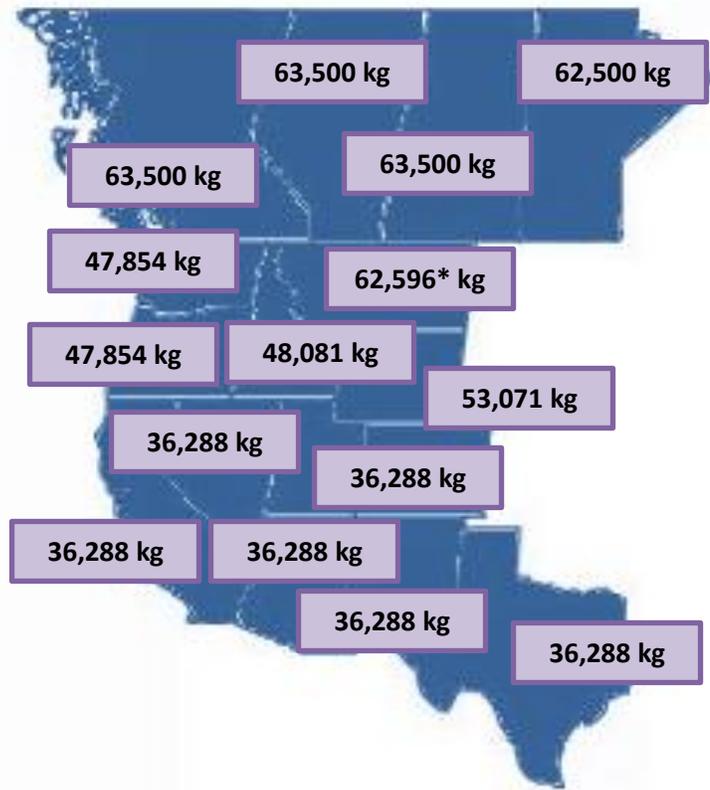
Standards for Gross Vehicle Weight

- Alberta's high-standard highway system routinely handles trucks of up to 63,500 kg (140,000 lb.) and provides links with all major Western North American markets.
- Long Combination Vehicles (LCVs) are limited to Western states. State laws and policies determine use and vary considerably across the west.

State Standards for Gross Vehicle Weight (in kg)

Source: Alberta Transportation

*The maximum weight is 59,875 kg or 132,000 lbs. for Montana. However carriers can register for up to 62,596 kg or 138,000 lbs. travelling between Sweetgrass and Shelby.



Truck Configurations

Higher truck weights and dimensions (Turnpike Doubles and Triples) provide shippers with the lowest possible unit cost for transporting their goods.

Legal Length

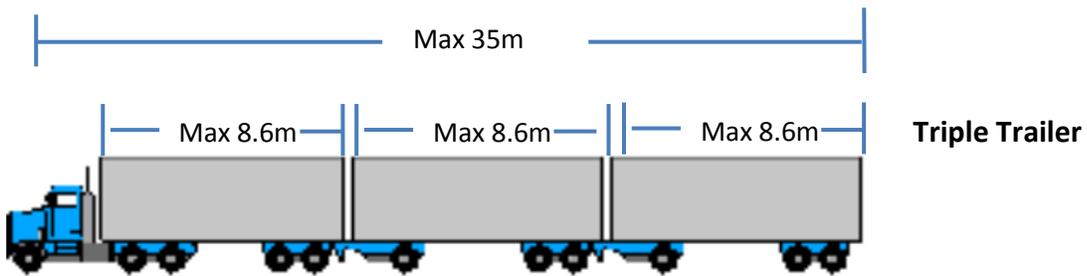
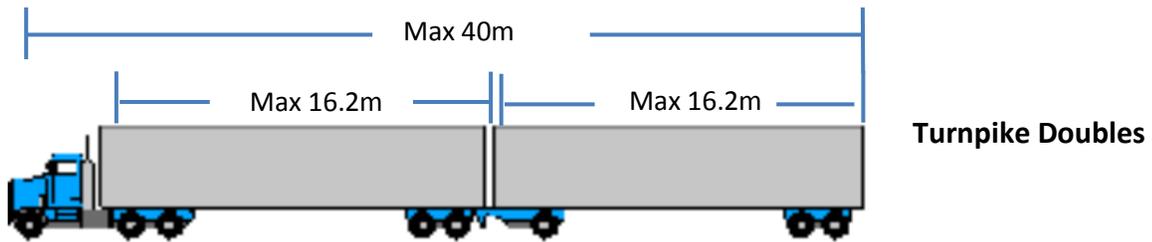
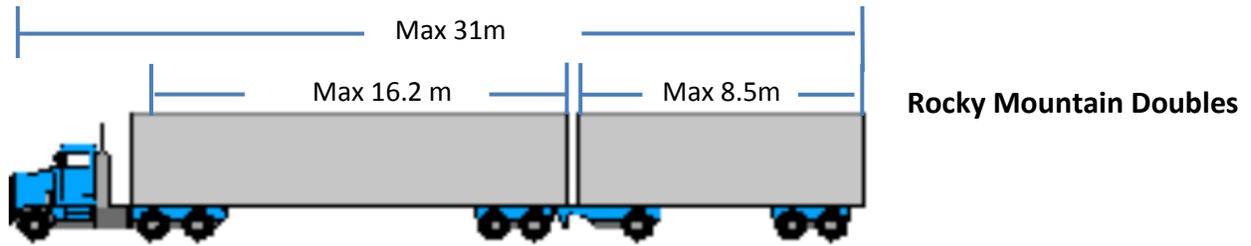


Semi-Trailer



Double Trailer

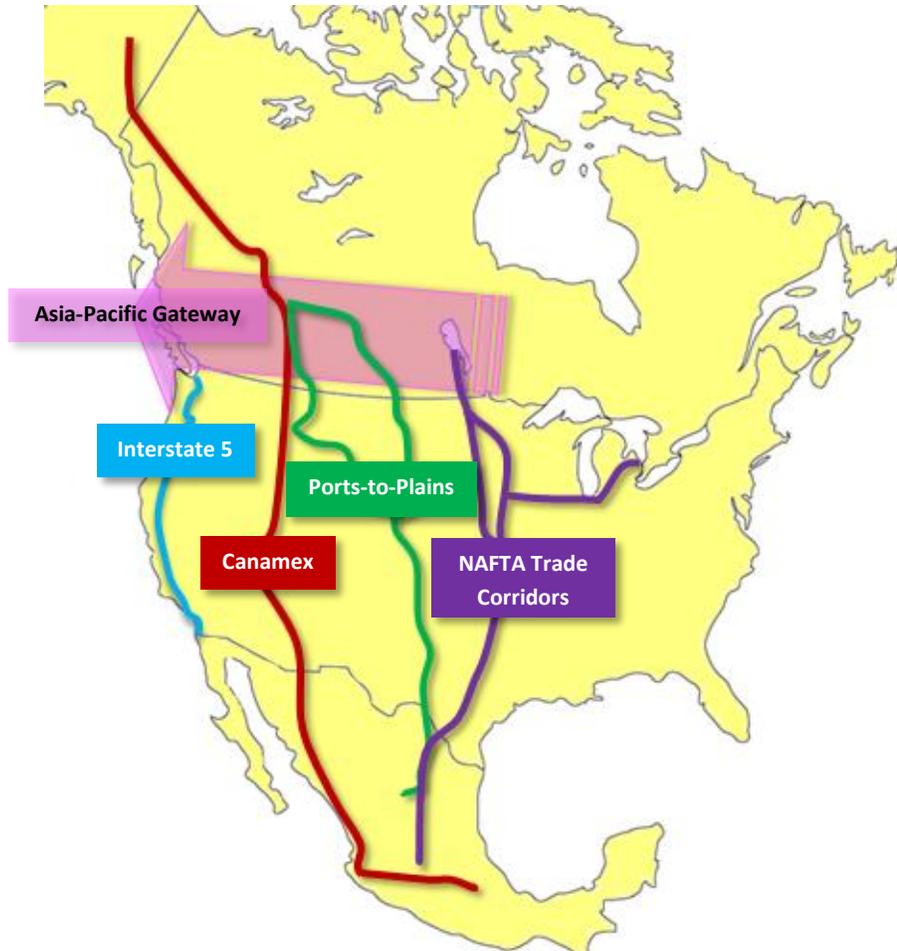
Long Combination Vehicles Legal Length (by permit)



Source: Alberta Transportation

Trade Corridors

Alberta's Important Trade Corridors



- The **CANAMEX** Trade Corridor links Canada, the United States and Mexico and includes over 6,000 km of highway networks. The CANAMEX Trade Corridor aims to improve North-South trade flows; increase transport productivity and reduce transport costs; promote a seamless and efficient system; and encourage harmonization.
- The **Ports-to-Plains** Alliance promotes economic and infrastructure development along eastern Alberta North-South routes that connect “North America’s energy and agriculture heartland”.
- The **Asia-Pacific Gateway and Corridor** is a network of transportation infrastructure including British Columbia’s Lower Mainland and Prince Rupert ports, road and rail connections stretching across Western Canada, key border crossings, and major Canadian airports. The corridor capitalizes on Canada’s West Coast ports, airports, road and rail links to establish a competitive, multi-modal trade corridor between Asia and North America that is

capable of handling significant trade volumes. Alberta is an export-driven economy that relies heavily on a competitive port and transportation system. Alberta's economy will be strengthened by the successful implementation of the Asia-Pacific Gateway and Corridor Initiative (APGCI) and the investments made in the transportation system of Alberta and Western Canada.

- **NAFTA Trade Corridors** often refer to United States interstate highways I-35, I-29, I-94, and the significant east-west connectors to those highways, Canada and Mexico across the central continental United States.

New West Partnership Trade Agreement

- In 2010, British Columbia, Alberta and Saskatchewan launched the New West Partnership, an agreement to find innovative ways to eliminate barriers to trade, labour mobility and investment.
- In 2011, under the New West Partnership, the provinces agreed to have consistent regulations and policies governing the operation of large transport trucks, without compromising safety. Uniform rules regarding the size and weights of vehicles and other aspects of trucking operations came into effect 2011, allowing trucks to operate more efficiently between provinces.



Key Trends

Key Trends to Watch

- Alberta's exports and imports by intermodal (rail and marine) reflect clear upward trends by value and percentage share of the province's total exports and imports by mode (see pages 9-10).
- In 2010, the value of Alberta's exports to the Southeast region of the United States surpassed Alberta's exports to the Northeast region for the first time during this period; in 2012, the value of Alberta's exports to the Southeast region exceeded those to the Northeast region by \$4.9 billion (see page 14).
- In 2007, the value of Alberta's imports from the Central region of the United States surpassed those from the West region; by 2011, the Central region of the United States became the primary region of origin for Alberta's imports. From 2002 to 2012, the value of Alberta's imports from the Central region grew over 200% or \$4.5 billion (see page 20).
- From 2002 to 2012, the most prominent upward trends by mode for the value of Alberta's exports to Mexico was intermodal (rail and marine); while for Alberta's imports from Mexico it was road and rail that reflected the more prominent upward trends (see pages 25-26).
- During this period, the value of Alberta's imports from India and Singapore demonstrate moderate to strong growth, with the strongest growth in recent years, from 2010 to 2012 (see page 30).
- In 2012, over \$63 billion worth of Canadian exports moved through Alberta to alternative provincial ports of exit. Notably, the value of Saskatchewan's exports moving through Alberta to alternative ports of exit increased steadily from 2008 to 2012, while the value of British Columbia's exports moving through Alberta declined over the same period (see page 31).
- In 2012, over \$60 billion worth of Canadian exports moved through Alberta's ports of exit. Notably, the value of Saskatchewan's exports moving through Alberta ports of exit increased from 2009 to 2012 (see page 32).
- The value of Alberta's intermodal exports through ports of exit at Emerson, Manitoba and Montreal, Quebec reflect moderate growth in recent years, from 2011 to 2012 (see page 33-34).

- Commercial and private itinerant aircraft movements, as well as enplaned and deplaned passengers, at Edmonton International Airport and Calgary International Airport show a clear upward trend (see pages 42-43).
- From 2002 to 2012, the value of Alberta's exports by air to the United States has declined for all main regions of destination. By value, the decline of Alberta's exports to the Northeast region was the most apparent, declining 85% or \$155 million during this period (see page 46).
- The value of Alberta's imports from the West region of the United States by air declined by 47% or \$582 million during this period, while imports by road increased by 55% or \$958 million. In addition, the value of Alberta's imports from the West region of the United States by intermodal also reflects moderate upward trends (see pages 24, 47, 57).
- Traffic volumes along the sections of highway approaching the Alberta-British Columbia border crossing on Highway 1, and the Alberta-Saskatchewan border crossing on Highway 16, reflect moderate growth during this period (see page 59).