Exhibit 39: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (no water transport)

Inbound Directions: Southern Counties: All Directions From All Origins
Inbound Flows: All Trade Flows from All Countries
Inbound Modes: Truck and Rail: All Types

Top 20 Inbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Lumber or Wood Products	1,318,031	(11.66%)	1,164,369	6.44%	1,239,391	1.62%	1,259,421
Secondary Traffic	1,262,325	(7.48%)	1,167,958	11.84%	1,306,265	37.11%	1,791,010
Nonmetallic Minerals	1,199,653	4.31%	1,251,303	31.42%	1,644,419	41.97%	2,334,545
Farm Products	1,151,150	6.68%	1,228,052	8.04%	1,326,784	12.37%	1,490,941
Clay, Concrete, Glass or Stone	437,045	(9.26%)	396,593	13.06%	448,397	20.47%	540,161
Chemicals or Allied Products	321,136	4.86%	336,745	14.72%	386,322	18.36%	457,249
Petroleum or Coal Products	245,249	9.38%	268,265	5.09%	281,917	(5.13%)	267,452
Food or Kindred Products	209,895	4.46%	219,263	15.03%	252,217	26.83%	319,895
Electrical Equipment	190,701	3.98%	198,291	18.86%	235,697	81.95%	428,862
Primary Metal Products	183,082	9.98%	201,356	18.56%	238,729	34.23%	320,443
Pulp, Paper or Allied Products	132,290	(6.94%)	123,114	8.86%	134,027	14.86%	153,947
Transportation Equipment	91,270	8.97%	99,458	20.48%	119,827	47.37%	176,592
Printed Matter	24,243	(3.52%)	23,390	9.76%	25,674	29.33%	33,205
Coal	24,053	5.45%	25,364	32.75%	33,670	37.13%	46,172
Machinery	23,573	9.91%	25,908	29.61%	33,579	64.40%	55,203
Waste or Scrap Materials	23,479	4.94%	24,638	13.67%	28,007	17.99%	33,047
Fabricated Metal Products	21,808	(3.29%)	21,092	19.39%	25,181	43.66%	36,173
Furniture or Fixtures	10,153	(10.64%)	9,072	14.19%	10,360	24.31%	12,878
Misc Manufacturing Products	10,128	7.44%	10,882	28.20%	13,950	70.20%	23,743
Rubber or Misc Plastics	6,369	1.47%	6,463	21.89%	7,878	45.39%	11,454
Total For Top 10 Commodities	6,518,265	(1.32%)	6,432,196	14.43%	7,360,138	25.13%	9,209,980
Top 10's Percent of Total	94.41%		94.32%		94.22%		93.81%
Total For Top 20 Commodities	6,885,630	(1.22%)	6,801,576	14.57%	7,792,290	25.67%	9,792,393
Top 20's Percent of Total	99.73%		99.74%		99.75%		99.75%
Total For All Commodities Inbound	6,904,149	(1.23%)	6,819,368	14.56%	7,811,999	25.67%	9,817,269

Directions: Southern Counties: All Directions From All Origins
Flows: All Trade Flows from All Countries
Modes: Truck and Rail: All Types

Comparison Chart For **Top 10 Inbound** Commodities

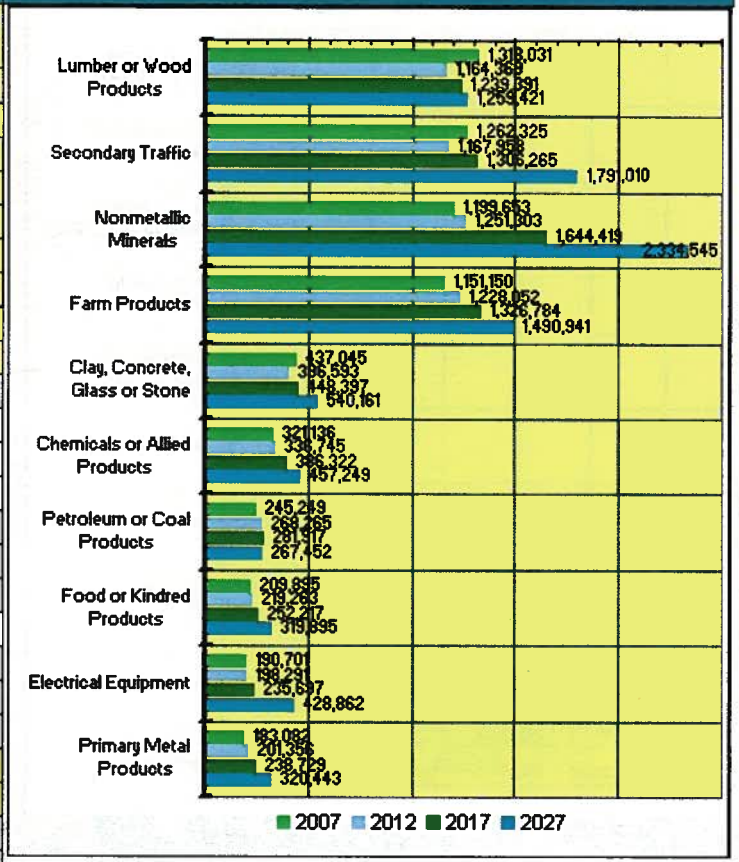
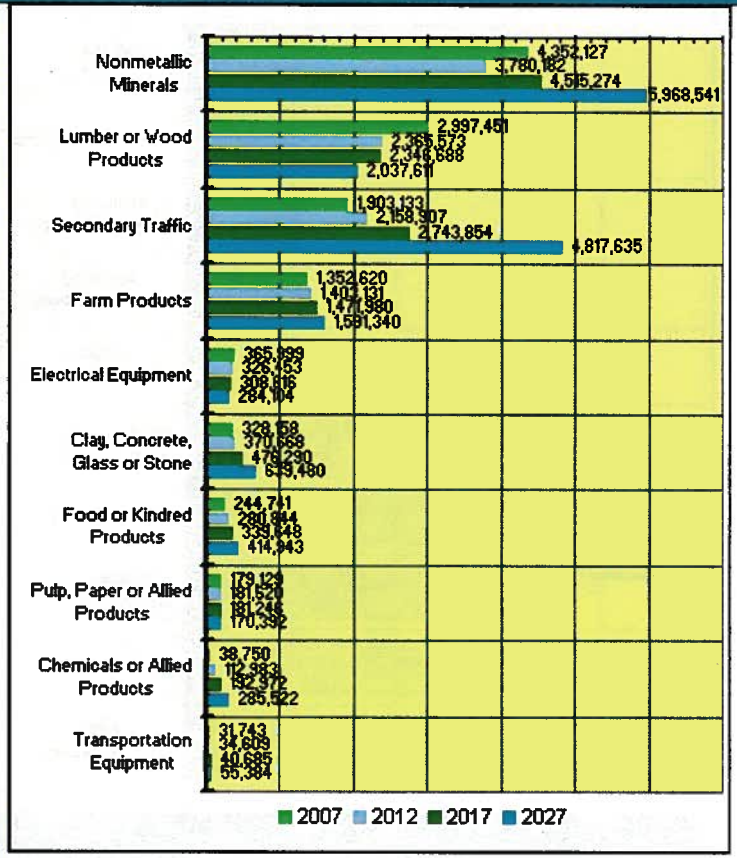


Exhibit 40: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (no water transport)

Outbound Directions:	Southern IPH Counties: All Directions to All Destinations						
Outbound Flows:	All Trade Flows to All Countries						
Outbound Modes:	Truck and Rail: All Types						
Top 20 Outbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Nonmetallic Minerals	4,352,127	(13.14%)	3,780,182	19.45%	4,515,274	32.19%	5,968,541
Lumber or Wood Products	2,997,451	(21.08%)	2,365,573	(0.80%)	2,346,688	(13.17%)	2,037,611
Secondary Traffic	1,903,133	13.44%	2,158,907	27.09%	2,743,854	75.58%	4,817,635
Farm Products	1,352,620	3.73%	1,403,131	4.91%	1,471,980	8.11%	1,591,340
Electrical Equipment	365,999	(10.81%)	326,453	(5.46%)	308,616	(7 94%)	284,104
Clay, Concrete, Glass or Stone	328,158	12.95%	370,668	28.50%	476,290	34.26%	639,480
Food or Kindred Products	244,741	14.75%	280,844	20.94%	339,648	22.17%	414,943
Pulp, Paper or Allied Products	179,129	1.39%	181,620	(0.21%)	181,246	(5.99%)	170,392
Chemicals or Allied Products	38,750	191.57 %	112,983	70.80%	192,972	47.96%	285,522
Transportation Equipment	31,743	9.03%	34,609	17.56%	40,685	36.13%	55,384
Misc Manufacturing Products	27,544	59.88%	44,037	53.99%	67,812	151.22 %	170,356
Waste or Scrap Materials	20,826	28.57%	26,775	8.79%	29,128	16.54%	33,945
Printed Matter	14,476	18.51%	17,155	26.46%	21,694	52.25%	33,029
Fabricated Metal Products	11,313	5.00%	11,879	43.32%	17,026	72.64%	29,393
Machinery	7,522	6.55%	8,014	24.19%	9,953	52.28%	15,157
Rail Intermodal Drayage to Ramp	5,407	2.07%	5,519	19.72%	6,607	50.55%	9,948
Metallic Ores	4,165	(43.73%)	2,344	(2.27%)	2,291	(2.18%)	2,241
Instrument, Photo Equip, Optical Eq	3,273	15.13%	3,769	38.06%	5,203	139.05 %	12,438
Primary Metal Products	1,422	(9.42%)	1,288	(12.44%)	1,128	(19.11%)	912
Tobacco Products	676	(22.49%)	524	(4.28%)	501	(14.74%)	428
Total For Top 10 Commodities	11,793,850	(6.60%)	11,014,969	14.55%	12,617,252	28.91%	16,264,952
Top 10's Percent of Total	99.18%		98.90%		98.72%		98.13%
Total For Top 20 Commodities	11,890,475	(6.34%)	11,136,273	14.75%	12,778,595	29.69%	16,572,798
Top 20's Percent of Total	99.99%		99.99%		99.99%		99.98%
Total For All Commodities	11,891,91	(6.34%)	11,137,75	14.75%	12,780,38	29.69%	16,575,33

Directions: Southern IPH Counties: All Directions to All Destinations
Flows: All Trade Flows to All Countries
Modes: Truck and Rail: All Types

Comparison Chart For **Top 10 Outbound** Commodities



Outbound	4		0		6		5
Outbound Directions:	Southern IPH Counties: All Directions to All Destinations						
Outbound Flows:	All Trade Flows to All Countries						
Outbound Modes:	Truck and Rail: All Types						
Top 20 Outbound Commodities	2007 Tons	Growth % ▶	2012 Tons	Growth % ▶	2017 Tons	Growth % ▶	2027 Tons
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Lumber or Wood Products	2,997,451	(21.08%)	2,365,573	(0.80%)	2,346,688	(13.17%)	2,037,611
Secondary Traffic	1,903,133	13.44%	2,158,907	27.09%	2,743,854	75.58%	4,817,635
Farm Products	1,352,620	3.73%	1,403,131	4.91%	1,471,980	8.11%	1,591,340
Electrical Equipment	365,999	(10.81%)	326,453	(5.46%)	308,616	(7.94%)	284,104
Clay, Concrete, Glass or Stone	328,158	12.95%	370,668	28.50%	476,290	34.26%	639,480
Food or Kindred Products	244,741	14.75%	280,844	20.94%	339,648	22.17%	414,943
Pulp, Paper or Allied Products	179,129	1.39%	181,620	(0.21%)	181,246	(5.99%)	170,392
Chemicals or Allied Products	38,750	191.57 %	112,983	70.80%	192,972	47.96%	285,522
Transportation Equipment	31,743	9.03%	34,609	17.56%	40,685	36.13%	55,384
Misc Manufacturing Products	27,544	59.88%	44,037	53.99%	67,812	151.22 %	170,356
Waste or Scrap Materials	20,826	28.57%	26,775	8.79%	29,128	16.54%	33,945
Printed Matter	14,476	18.51%	17,155	26.46%	21,694	52.25%	33,029
Fabricated Metal Products	11,313	5.00%	11,879	43.32%	17,026	72.64%	29,393
Machinery	7,522	6.55%	8,014	24.19%	9,953	52.28%	15,157
Rail Intermodal Drayage to Ramp	5,407	2.07%	5,519	19.72%	6,607	50.55%	9,948
Metallic Ores	4,165	(43.73%)	2,344	(2.27%)	2,291	(2.18%)	2,241
Instrument, Photo Equip, Optical Eq	3,273	15.13%	3,769	38.06%	5,203	139.05 %	12,438
Primary Metal Products	1,422	(9.42%)	1,288	(12.44%)	1,128	(19.11%)	912
Tobacco Products	676	(22.49%)	524	(4.28%)	501	(14.74%)	428
Total For Top 10 Commodities	11,793,850	(6.60%)	11,014,969	14.55%	12,617,252	28.91%	16,264,952
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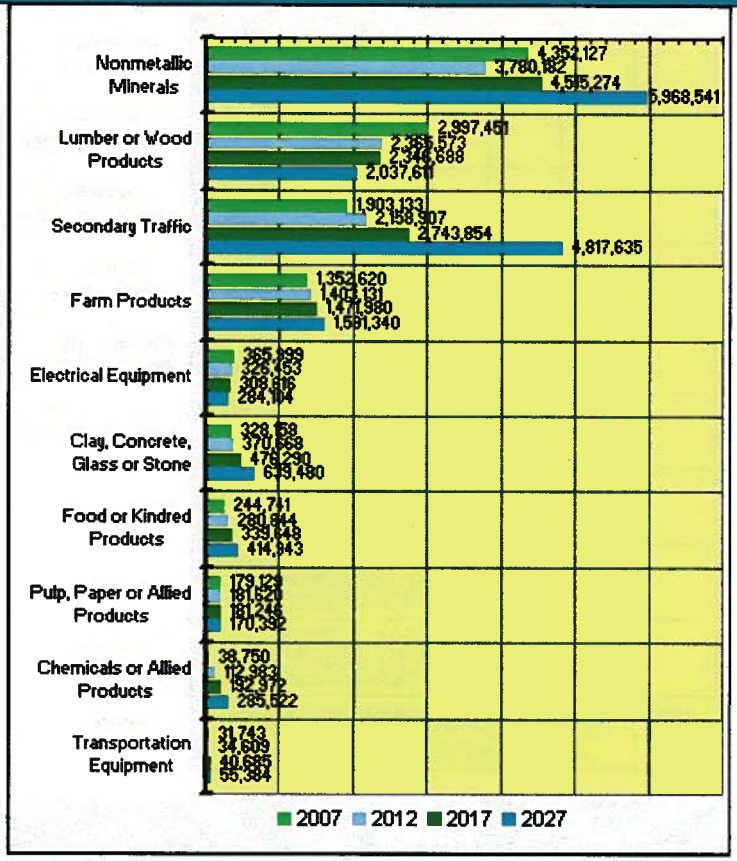
Top 20's Percent of Total	99.99%		99.99%		99.99%		99.98%
Total For All Commodities	11,891,91	(6.34%)	11,137,75	14.75%	12,780,38	29.69%	16,575,33

Directions :	Southern IPH Counties: All Directions to All Destinations
Flows:	All Trade Flows to All Countries
Modes:	Truck and Rail: All Types

Comparison Chart For **Top 10 Outbound** Commodities



Outbound	4		0		6		5

Outbound Directions: Southern IPH Counties: All Directions to All Destinations
Outbound Flows: All Trade Flows to All Countries
Outbound Modes: Truck and Rail: All Types

Top 20 Outbound Commodities	2007 Tons	Growth % ▶	2012 Tons	Growth % ▶	2017 Tons	Growth % ▶	2027 Tons
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Lumber or Wood Products	2,997,451	(21.08%)	2,365,573	(0.80%)	2,346,688	(13.17%)	2,037,611
Secondary Traffic	1,903,133	13.44%	2,158,907	27.09%	2,743,854	75.58%	4,817,635
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Electrical Equipment	365,999	(10.81%)	326,453	(5.46%)	308,616	(7.94%)	284,104
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Pulp, Paper or Allied Products	179,129	1.39%	181,620	(0.21%)	181,246	(5.99%)	170,392
Chemicals or Allied Products	38,750	191.57%	112,983	70.80%	192,972	47.96%	285,522
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Misc Manufacturing Products	27,544	59.88%	44,037	53.99%	67,812	151.22%	170,356
Waste or Scrap Materials	20,826	28.57%	26,775	8.79%	29,128	16.54%	33,945
Printed Matter	14,476	18.51%	17,155	26.46%	21,694	52.25%	33,029
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Rail Intermodal Drayage to Ramp	5,407	2.07%	5,519	19.72%	6,607	50.55%	9,948
Metallic Ores	4,165	(43.73%)	2,344	(2.27%)	2,291	(2.18%)	2,241
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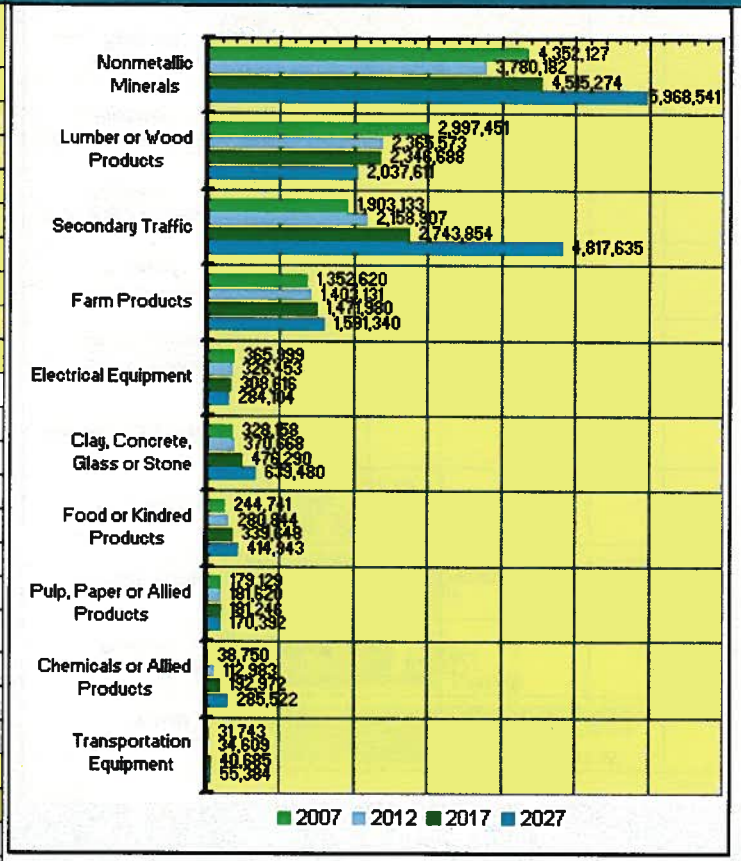
Primary Metal Products	1,422	(9.42%)	1,288	(12.44%)	1,128	(19.11%)	912
Tobacco Products	676	(22.49%)	524	(4.28%)	501	(14.74%)	428
Total For Top 10 Commodities	11,793,850	(6.60%)	11,014,969	14.55%	12,617,252	28.91%	16,264,952
Top 10's Percent of Total	99.18%		98.90%		98.72%		98.13%
Total For Top 20 Commodities	11,890,475	(6.34%)	11,136,273	14.75%	12,778,595	29.69%	16,572,798
Top 20's Percent of Total	99.99%		99.99%		99.99%		99.98%
Total For All Commodities Outbound	11,891,914	(6.34%)	11,137,750	14.75%	12,780,386	29.69%	16,575,335

Directions: Southern IPH Counties: All Directions to All Destinations
Flows: All Trade Flows to All Countries
Modes: Truck and Rail: All Types

Comparison Chart For **Top 10 Outbound** Commodities



ADDITION OF WATER TRANSPORTATION TO SOUTHERN COUNTY FREIGHT FLOWS

The addition of waterborne freight on the Columbia/Snake River to the tonnage amounts that are moved by truck and rail in the Southern Counties provides a different alignment of the inbound and outbound total shares. There are 36 ports which can be serviced along the navigable portion of the river. Portland, OR and Vancouver, WA serve as the global gateway on the western end of the river providing access for ocean going bulk and container ships. Lewiston is the major container handling river port in the IPH study area at the eastern end of the river corridor. Containerized service is also available between Portland and/or Boardman and Umatilla, OR; and Pasco, WA (however these three river ports are not in the IPH study area).

Currently there are three operators offering container-on-barge service: Bernert Barge Lines, Foss Maritime, and Tidewater Barge Lines. Several barges can be tied together and can be shuttled between ports by a single tug boat. There are eight dams and navigable locks between Portland and Lewiston. Barge transit time from Portland to Lewiston is approximately two days, making the service only one day longer compared to draying containers out of Portland over the highway to Lewiston. Because many containers can be carried on a single barge, the service is less costly than highway drayage service that moves only one container per truck. If a shipper can tolerate the extra day of transit time, they can take advantage of the savings that can be obtained by using the barge service compared to drayage service. There is more outbound freight than inbound, creating a shortage of outbound equipment.

Source: Tidewater Barge Lines

Inbound commodity forecast growth for water transit only **(Exhibit 41)**: The table and chart shows the forecasted growth from the base year of 2007. In 2007 only nine commodities were moved inbound (pie charts are not shown because there are not ten commodities). Overall there will be 84 percent growth by 2027.

- petroleum and coal products are the largest inbound commodity in 2007 at 72.6 percent of the total inbound and is forecast to grow 94 percent growth by 2207
- farm products are the second largest inbound commodity in 2007 at 10.8 percent growing in is forecast to grow 67.7 percent by 2027.

Outbound commodity forecast growth for water transit only **(Exhibit 42)**: In 2007 only eight commodities were moved outbound (pie charts are not shown because there are not ten commodities). Overall, tonnage remains basically flat between 2007 and 2027.

- farm products is the largest outbound commodity, however it is forecast to decrease by or 724,000 tons, or 37 percent between 2007 and 2027
- processed food and kindred products is the second largest product, gaining 468,000 tons or 41 percent between 2007 and 2027, (its growth is the opposite of farm products, signaling a change to value added food products)

- waste and scrape leaving the area increases by 57.7 percent during the study period.

Exhibit 41: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (water only)

Inbound Directions: Southern Counties: Local and West From All Origins
Inbound Flows: All Trade Flows from All Countries
Inbound Modes: Water: All Types

Top 20 Inbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Petroleum or Coal Products	1,113,993	22.23%	1,361,647	20.25%	1,637,335	31.99%	2,161,061
Farm Products	166,228	11.92%	186,047	10.89%	206,310	19.01%	245,523
Nonmetallic Minerals	114,049	1.51%	115,773	18.72%	137,441	23.38%	169,571
Waste or Scrap Materials	78,088	9.17%	85,251	8.37%	92,389	33.13%	123,002
Food or Kindred Products	35,411	16.87%	41,386	12.27%	46,464	11.61%	51,859
Lumber or Wood Products	11,829	60.09%	18,937	45.19%	27,495	49.09%	40,991
Fresh Fish or Marine Products	4,952	13.12%	5,601	11.22%	6,230	19.13%	7,422
Misc Freight Shipments	4,662	15.37%	5,379	18.80%	6,390	56.94%	10,029
Chemicals or Allied Products	2,123	86.98%	3,969	61.68%	6,417	78.41%	11,449
Total For Top 10 Commodities	1,531,335	19.11%	1,823,991	18.78%	2,166,471	30.21%	2,820,907
Top 10's Percent of Total	100.00%		100.00%		100.00%		100.00%
Total For Top 20 Commodities	1,531,335	19.11%	1,823,991	18.78%	2,166,471	30.21%	2,820,907
Top 20's Percent of Total	100.00%		100.00%		100.00%		100.00%
Total For All Commodities Inbound	1,531,335	19.11%	1,823,991	18.78%	2,166,471	30.21%	2,820,907

Directions: Southern Counties: Local and West From All Origins
Flows: All Trade Flows from All Countries
Modes: Water: All Types

Comparison Chart For **Top 10 Inbound** Commodities

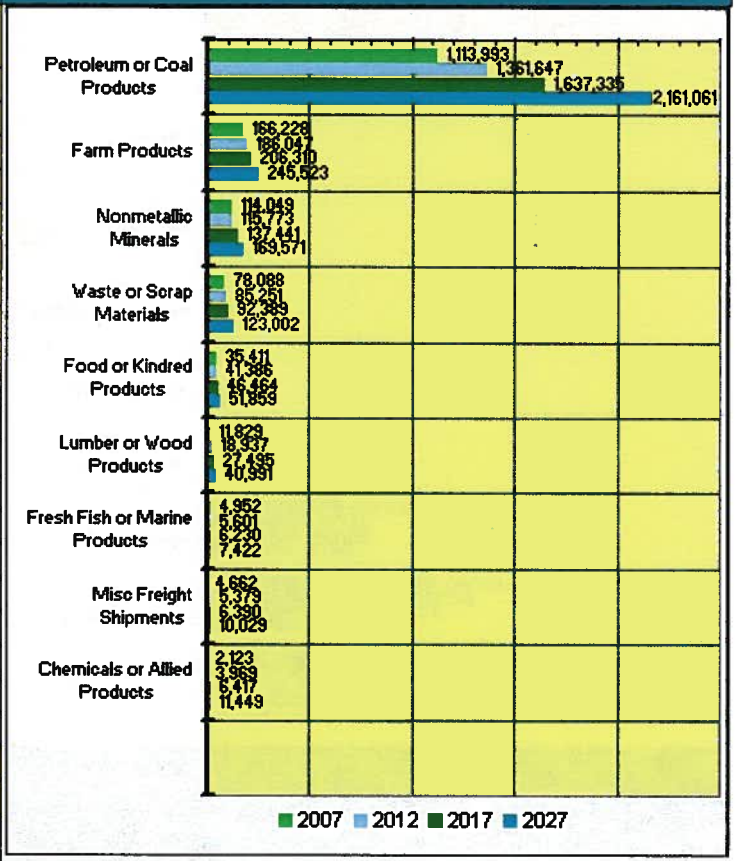


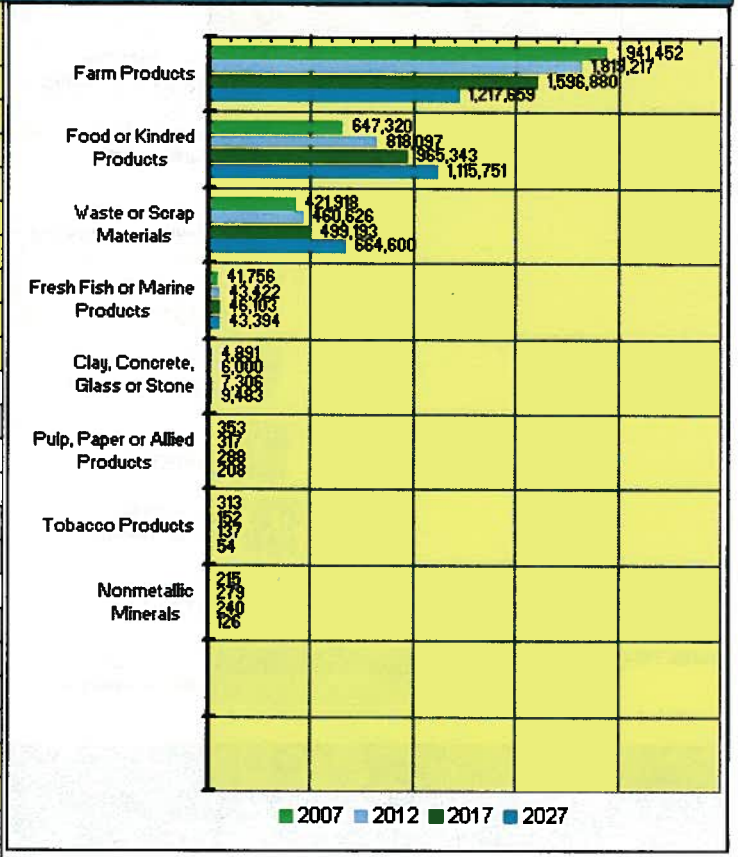
Exhibit 42: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (water only)

Outbound Directions: Southern Counties: Local and West to All Destinations (water only)
Outbound Flows: All Trade Flows to All Countries
Outbound Modes: Water: All Types

Top 20 Outbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Farm Products	1,941,452	(6.30%)	1,819,217	(12.22%)	1,596,880	(23.75%)	1,217,659
Food or Kindred Products	647,320	26.38%	818,097	18.00%	965,343	15.58%	1,115,751
Waste or Scrap Materials	421,918	9.17%	460,626	8.37%	499,193	33.13%	664,600
Fresh Fish or Marine Products	41,756	3.99%	43,422	6.18%	46,103	(5.88%)	43,394
Clay, Concrete, Glass or Stone	4,891	22.67%	6,000	21.76%	7,306	29.80%	9,483
Pulp, Paper or Allied Products	353	(10.01%)	317	(9.30%)	288	(27.61%)	208
Tobacco Products	313	(51.28%)	152	(9.99%)	137	(60.64%)	54
Nonmetallic Minerals	215	29.94%	279	(13.83%)	240	(47.48%)	126
Total For Top 10 Commodities	3,058,218	2.94%	3,148,110	(1.04%)	3,115,490	(2.06%)	3,051,275
Top 10's Percent of Total	100.00%		100.00%		100.00%		100.00%
Total For Top 20 Commodities	3,058,218	2.94%	3,148,110	(1.04%)	3,115,490	(2.06%)	3,051,275
Top 20's Percent of Total	100.00%		100.00%		100.00%		100.00%
Total For All Commodities Outbound	3,058,218	2.94%	3,148,110	(1.04%)	3,115,490	(2.06%)	3,051,275

Directions: Southern Counties: Local and West to All Destinations
Flows: All Trade Flows to All Countries
Modes: Water: All Types

Comparison Chart For **Top 10 Outbound** Commodities



The addition of the waterborne freight shows the impact of the tonnage in the pie charts. Without waterborne freight, lumber and secondary freight are the largest and second largest inbound commodities. After waterborne freight is added to the inbound tonnage, petroleum becomes the largest inbound commodity, followed by lumber and then farm products.

Inbound commodity share with waterborne freight included **(Exhibit 43)**: Inbound commodity flows including waterborne freight in 2007 indicates petroleum's prominent share and how it and mineral products will increase in share while lumber and farm products will decrease in share. The top five commodities represent 78 percent of the total inbound tonnage.

- petroleum or coal products is the largest inbound commodity at 16.1 percent
- lumber of wood products is second at 15.7 percent
- farm products are a close third at 15.6 percent
- nonmetallic minerals are right behind at 15.5 percent
- secondary freight rounds out the top five at 14.9 percent.

Outbound commodity share with waterborne freight included **(Exhibit 44)**: The top four commodities represent 84 percent of the total outbound freight. The pie charts easily depict the significance of lumber and nonmetallic minerals in outbound tonnage for the Northern Counties.

- nonmetallic minerals is the largest outbound commodity at 29.1 percent
- farm products are in second position at 22.2 percent
- lumber of wood products are third at 20 percent
- secondary freight rounds out the top four at 12.7 percent.

Exhibit 43: 2007 and 2027 Southern Counties Top Ten Inbound Commodities (with water)

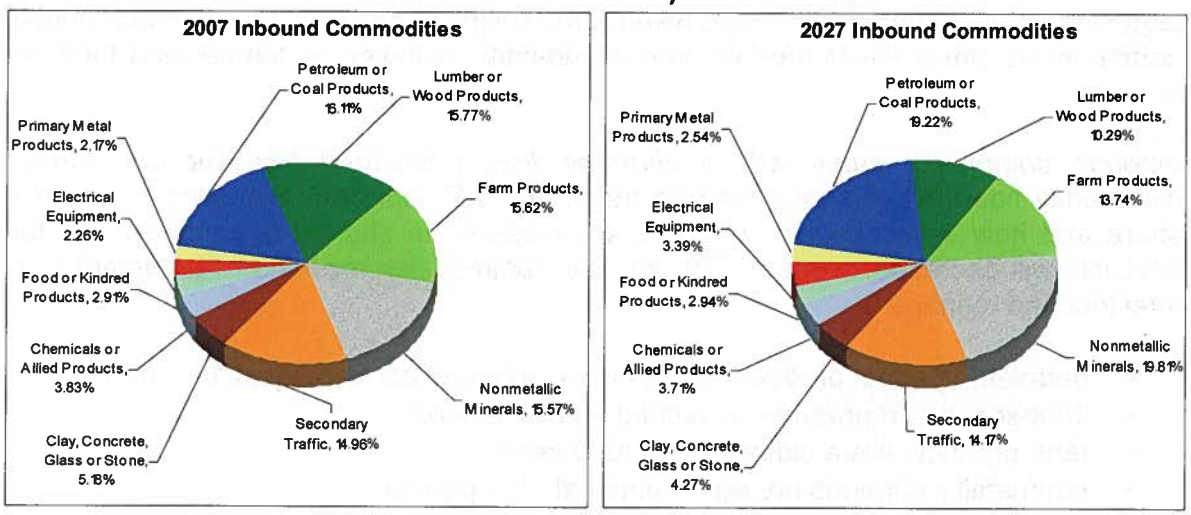
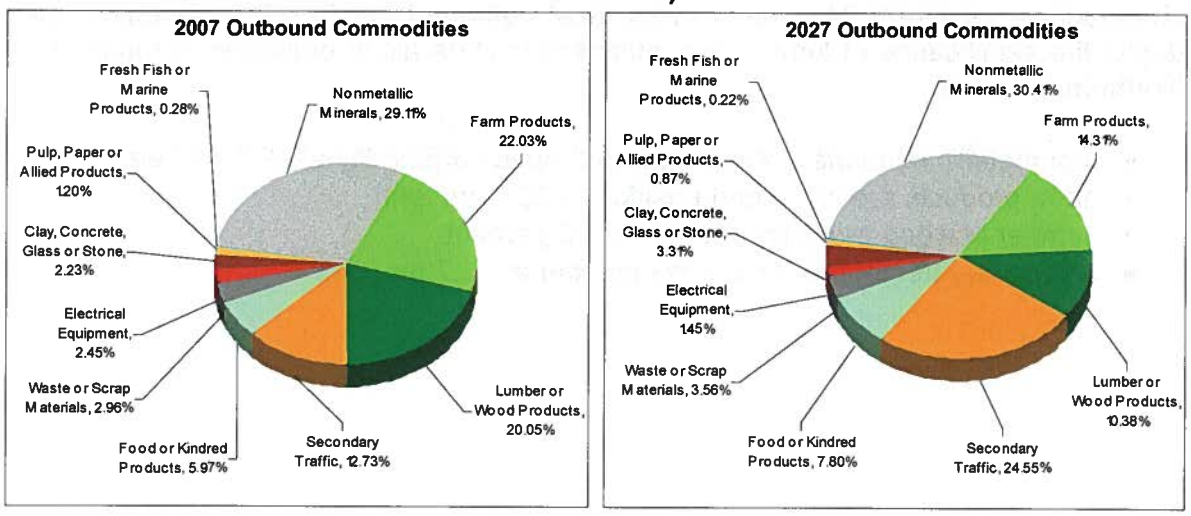


Exhibit 44: 2007 and 2027 Southern Counties Top Ten Outbound Commodities (with water)



The pie charts can be cross referenced with **Exhibit 45** to determine the tonnage changes for the inbound (table on the left) and outbound (table on the right) commodities sorted in descending order for tonnage for the year 2007. The center column indicates the forecast growth percentage for the commodities by 2027.

Inbound commodity forecast growth with waterborne freight included **(Exhibit 46)**: The table and chart shows the forecasted growth from the base year of 2007 and each of study periods.

- petroleum is the largest inbound commodity growing by 78.6 percent by 2027

- lumber products are the only commodity that declines during the study period, by 2.2 percent by 2027, however the decline is not a result of waterborne transit
- farm products increase by 31.8 percent during the study period, both surface transit and water transit have increases during the study period
- nonmetallic minerals increases by 90.6 percent over the study period, but there is minimal contribution to that growth as a result of increases in waterborne transit
- most other commodities take a slight recessionary dip but then experience growth through the remainder of the study period.

Outbound commodity forecast growth with waterborne freight included **(Exhibit 47)**:

- nonmetallic minerals has the largest share of outbound tonnage at 29 percent, increasing slightly to 30.1 percent by 2027, there is only marginal tonnage transported by barge on the river
- farm products have the second largest share in 2007 but after a decline in waterborne tonnage by 14.7 percent, farm share should actually be ranked third in 2027
- lumber or wood products are the third largest commodity and forecast to decrease 32 percent in total tonnage for 2027 over 2007. After the decrease it should ranked as the fourth largest commodity. Most of the decline will result from surface transportation as not much of the commodity is shipped by barge
- secondary freight increases by 153 percent during the study period, but all of the increase is from surface transportation. Secondary freight is not shown as one of the commodities that are typically transported via barge on the river corridor.

Exhibit 45: 2007 and 2027 Southern Counties Commodities Forecast Changes (with water transport)

Southern Counties Inbound Top 20 Commodities (+ Water Freight)	2007 %	2007 Tons	Growth % ►	2027 Tons	2027 %
Petroleum or Coal Products	16.11%	1,359,242	78.67%	2,428,513	19.22%
Lumber or Wood Products	15.77%	1,329,859	(2.21%)	1,300,411	10.29%
Farm Products	15.62%	1,317,378	31.81%	1,736,465	13.74%
Nonmetallic Minerals	15.57%	1,313,702	90.62%	2,504,116	19.81%
Secondary Freight	14.96%	1,262,325	41.88%	1,791,010	14.17%
Clay, Concrete, Glass or Stone	5.18%	437,045	23.59%	540,161	4.27%
Chemicals or Allied Products	3.83%	323,258	44.99%	468,697	3.71%
Food or Kindred Products	2.91%	245,306	51.55%	371,754	2.94%
Electrical Equipment	2.26%	190,701	124.89%	428,862	3.39%
Primary Metal Products	2.17%	183,082	75.03%	320,443	2.54%
Pulp, Paper or Allied Products	1.57%	132,290	16.37%	153,947	1.22%
Waste or Scrap Materials	1.20%	101,566	53.64%	156,049	1.23%
Transportation Equipment	1.08%	91,270	93.48%	176,592	1.40%
Printed Matter	0.29%	24,243	36.97%	33,205	0.26%
Coal	0.29%	24,053	91.96%	46,172	0.37%
Machinery	0.28%	23,573	134.18%	55,203	0.44%
Fabricated Metal Products	0.26%	21,808	65.87%	36,173	0.29%
Furniture or Fixtures	0.12%	10,153	26.85%	12,878	0.10%
Misc Manufacturing Products	0.12%	10,128	134.43%	23,743	0.19%
Rubber or Misc Plastics	0.08%	6,369	79.82%	11,454	0.09%

Southern Counties Outbound Top 20 Commodities (+ Water Freight)	2007 %	2007 Tons	Growth % ►	2027 Tons	2027 %
Nonmetallic Minerals	29.11%	4,352,342	37.14%	5,968,668	30.41%
Farm Products	22.03%	3,294,072	(14.73%)	2,808,999	14.31%
Lumber or Wood Products	20.05%	2,997,451	(32.02%)	2,037,611	10.38%
Secondary Freight	12.73%	1,903,133	153.14%	4,817,635	24.55%
Food or Kindred Products	5.97%	892,061	71.59%	1,530,694	7.80%
Waste or Scrap Materials	2.96%	442,744	57.78%	698,545	3.56%
Electrical Equipment	2.45%	365,999	(22.38%)	284,104	1.45%
Clay, Concrete, Glass or Stone	2.23%	333,049	94.86%	648,963	3.31%
Pulp, Paper or Allied Products	1.20%	179,481	(4.95%)	170,600	0.87%
Fresh Fish or Marine Products	0.28%	42,061	4.22%	43,836	0.22%
Chemicals or Allied Products	0.26%	38,750	636.84%	285,522	1.45%
Transportation Equipment	0.21%	31,743	74.47%	55,384	0.28%
Misc Manufacturing Products	0.18%	27,544	518.48%	170,356	0.87%
Printed Matter	0.10%	14,476	128.16%	33,029	0.17%
Fabricated Metal Products	0.08%	11,313	159.81%	29,393	0.15%
Machinery	0.05%	7,522	101.51%	15,157	0.08%
Rail Intermodal Drayage to Ramp	0.04%	5,407	83.99%	9,948	0.05%
Metallic Ores	0.03%	4,165	(46.21%)	2,241	0.01%
Instrument, Photo Equip, Optical Eq	0.02%	3,273	279.98%	12,438	0.06%
Primary Metal Products	0.01%	1,422	(35.84%)	912	0.00%

Exhibit 46: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (with water transport)

Inbound Directions: Southern Counties: All Directions From All Origins
Inbound Flows: All Trade Flows from All Countries
Inbound Modes: Truck, Rail and Water: All Types

Top 20 Inbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Petroleum or Coal Products	1,359,242	19.91%	1,629,913	17.75%	1,919,252	26.53%	2,428,513
Lumber or Wood Products	1,329,859	(11.02%)	1,183,306	7.06%	1,266,886	2.65%	1,300,411
Farm Products	1,317,378	7.34%	1,414,100	8.41%	1,533,094	13.27%	1,736,465
Nonmetallic Minerals	1,313,702	4.06%	1,367,075	30.34%	1,781,860	40.53%	2,504,116
Secondary Traffic	1,262,325	(7.48%)	1,167,958	11.84%	1,306,265	37.11%	1,791,010
Clay, Concrete, Glass or Stone	437,045	(9.26%)	396,593	13.06%	448,397	20.47%	540,161
Chemicals or Allied Products	323,258	5.40%	340,714	15.27%	392,739	19.34%	468,697
Food or Kindred Products	245,306	6.25%	260,649	14.59%	298,681	24.47%	371,754
Electrical Equipment	190,701	3.98%	198,291	18.86%	235,697	81.95%	428,862
Primary Metal Products	183,082	9.98%	201,356	18.56%	238,729	34.23%	320,443
Pulp, Paper or Allied Products	132,290	(6.94%)	123,114	8.86%	134,027	14.86%	153,947
Waste or Scrap Materials	101,566	8.19%	109,889	9.56%	120,396	29.61%	156,049
Transportation Equipment	91,270	8.97%	99,458	20.48%	119,827	47.37%	176,592
Printed Matter	24,243	(3.52%)	23,390	9.76%	25,674	29.33%	33,205
Coal	24,053	5.45%	25,364	32.75%	33,670	37.13%	46,172
Machinery	23,573	9.91%	25,908	29.61%	33,579	64.40%	55,203
Fabricated Metal Products	21,808	(3.29%)	21,092	19.39%	25,181	43.66%	36,173
Furniture or Fixtures	10,153	(10.64%)	9,072	14.19%	10,360	24.31%	12,878
Misc Manufacturing Products	10,128	7.44%	10,882	28.20%	13,950	70.20%	23,743
Rubber or Misc Plastics	6,369	1.47%	6,463	21.89%	7,878	45.39%	11,454
Total For Top 10 Commodities	7,961,899	2.49%	8,159,955	15.46%	9,421,599	26.20%	11,890,433
Top 10's Percent of Total	94.39%		94.41%		94.42%		94.08%
Total For Top 20 Commodities	8,407,351	2.46%	8,614,587	15.46%	9,946,140	26.64%	12,595,849
Top 20's Percent of Total	99.67%		99.67%		99.68%		99.67%
Total For All Commodities Inbound	8,435,484	2.46%	8,643,359	15.45%	9,978,469	26.65%	12,638,176

Directions: Southern Counties: All Directions From All Origins
Flows: All Trade Flows from All Countries
Modes: Truck, Rail and Water: All Types

Comparison Chart For **Top 10 Inbound** Commodities

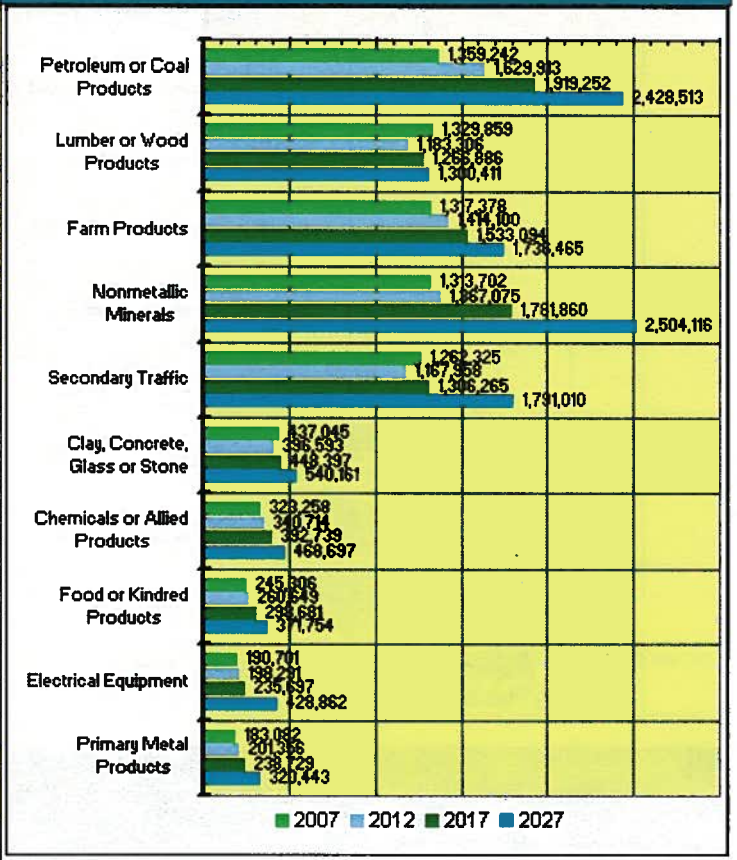


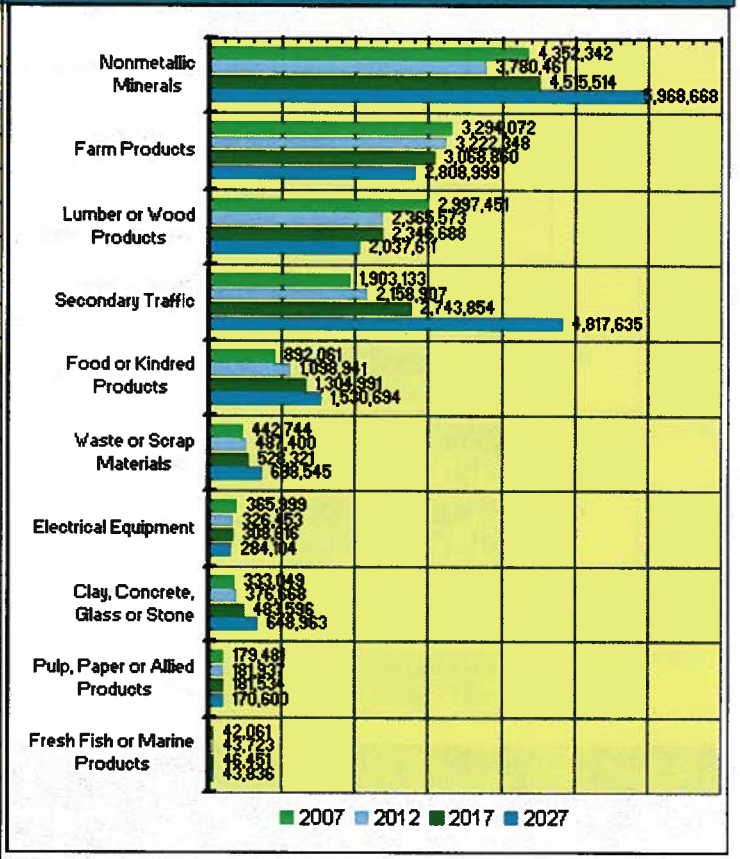
Exhibit 47: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (with water transport)

Outbound Directions: Southern Counties: All Directions to All Destinations (with water)
Outbound Flows: All Trade Flows to All Countries
Outbound Modes: Truck, Rail and Water: All Types

Top 20 Outbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Nonmetallic Minerals	4,352,342	(13.14%)	3,780,461	19.44%	4,515,514	32.18%	5,968,668
Farm Products	3,294,072	(2.18%)	3,222,348	(4.76%)	3,068,860	(8.47%)	2,808,999
Lumber or Wood Products	2,997,451	(21.08%)	2,365,573	(0.80%)	2,346,688	(13.17%)	2,037,611
Secondary Traffic	1,903,133	13.44%	2,158,907	27.09%	2,743,854	75.58%	4,817,635
Food or Kindred Products	892,061	23.19%	1,098,941	18.75%	1,304,991	17.30%	1,530,694
Waste or Scrap Materials	442,744	10.09%	487,400	8.40%	528,321	32.22%	698,545
Electrical Equipment	365,999	(10.81%)	326,453	(5.46%)	308,616	(7.94%)	284,104
Clay, Concrete, Glass or Stone	333,049	13.10%	376,668	28.39%	483,596	34.20%	648,963
Pulp, Paper or Allied Products	179,481	1.37%	181,937	(0.22%)	181,534	(6.02%)	170,600
Fresh Fish or Marine Products	42,061	3.95%	43,723	6.24%	46,451	(5.63%)	43,836
Chemicals or Allied Products	38,750	191.57%	112,983	70.80%	192,972	47.96%	285,522
Transportation Equipment	31,743	9.03%	34,609	17.56%	40,685	36.13%	55,384
Misc Manufacturing Products	27,544	59.88%	44,037	53.99%	67,812	151.22%	170,356
Printed Matter	14,476	18.51%	17,155	26.46%	21,694	52.25%	33,029
Fabricated Metal Products	11,313	5.00%	11,879	43.32%	17,026	72.64%	29,393
Machinery	7,522	6.55%	8,014	24.19%	9,953	52.28%	15,157
Rail Intermodal Drayage to Ramp	5,407	2.07%	5,519	19.72%	6,607	50.55%	9,948
Metallic Ores	4,165	(43.73%)	2,344	(2.27%)	2,291	(2.18%)	2,241
Instruments, Photo Equip, Optical Eq	3,273	15.13%	3,769	38.06%	5,203	139.05%	12,438
Primary Metal Products	1,422	(9.42%)	1,288	(12.44%)	1,128	(19.11%)	912
Total For Top 10 Commodities	14,802,393	(5.13%)	14,042,411	10.58%	15,528,424	22.42%	19,009,654
Top 10's Percent of Total	99.01%		98.30%		97.69%		96.86%
Total For Top 20 Commodities	14,948,008	(4.44%)	14,284,008	11.27%	15,893,794	23.47%	19,624,033
Top 20's Percent of Total	99.99%		99.99%		99.99%		99.99%
Total For All Commodities Outbound	14,950,132	(4.44%)	14,285,860	11.27%	15,895,877	23.47%	19,626,610

Directions: Southern Counties: All Directions to All Destinations
Flows: All Trade Flows to All Countries
Modes: Truck, Rail and Water: All Types

Comparison Chart For **Top 10 Outbound** Commodities



NET CHANGES FOR THE IPH'S INBOUND AND OUTBOUND COMMODITY FLOWS

A summary of tonnage change for inbound commodities for 2027 compared to 2007 is shown in **Exhibit 48**. The exhibit sums all tonnage gains and losses for all modes in all directions to indicate which commodities are forecast to experience net gains (9,552,985 tons) or declines (-1,287,923 tons). There is a net increase for inbound commodities of 8,265,062 tons.

Exhibit 48: 2027 Over 2007 IPH's Inbound Commodity Growth

Inbound Commodities - Change in Tonnage 2027 Over 2007			
Commodities with Increased Tonnage		Commodities with Decreased Tonnage	
Secondary Traffic	3,557,913	Lumber or Wood Products	(1,230,546)
Nonmetallic Minerals	1,079,735	Apparel or Related Products	(42,761)
Coal	790,343	Leather or Leather Products	(12,134)
Chemicals or Allied Products	486,879	Air Freight Drayage to Airport	(2,123)
Electrical Equipment	486,379	Tobacco Products	(359)
Transportation Equipment	449,785		
Primary Metal Products	414,071		
Farm Products	398,840		
Food or Kindred Products	383,178		
Petroleum or Coal Products	314,558		
Machinery	204,338		
Rail Intermodal Drayage to Ramp	178,226		
Clay, Concrete, Glass or Stone	133,127		
Misc Manufacturing Products	116,425		
Fabricated Metal Products	96,520		
Rail Intermodal Drayage from Ramp	85,668		
Waste or Scrap Materials	73,692		
Rubber or Misc Plastics	62,552		
Pulp, Paper or Allied Products	54,860		
Furniture or Fixtures	54,013		
Misc Mixed Shipments	42,456		
Printed Matter	29,626		
Instrument, Photo Equip, Optical Eq	23,348		
Freight Forwarder Traffic	16,009		
Air Freight Drayage from Airport	6,015		
Fresh Fish or Marine Products	4,143		
Misc Freight Shipments	3,906		
Small Packaged Freight Shipments	2,088		
Shipping Containers	1,731		
Crude Petrol. or Natural Gas	1,180		
Metallic Ores	865		
Textile Mill Products	461		
Ordnance or Accessories	47		
Forest Products	10		
Total	9,552,985	Total	(1,287,923)
Net Change = 8,265,062			

A summary of tonnage change for outbound commodities for 2027 compared to 2007 is shown in **Exhibit 49**. The exhibit sums all tonnage gains and losses for all modes in all directions to indicate which commodities are forecast to experience net gains (8,955,429) million tons or declines (-4,150,702) tons. There is a net increase for inbound commodities of 4,804,727 tons.

Exhibit 49: 2027 Over 2007 IPH Study Area's Outbound Commodity Growth

Outbound Commodities - Change in Tonnage 2027 Over 2007			
Commodities with Increased Tonnage		Commodities with Decreased Tonnage	
Secondary Traffic	3,896,160	Lumber or Wood Products	(2,927,128)
Nonmetallic Minerals	1,479,975	Farm Products	(936,269)
Machinery	722,467	Primary Metal Products	(162,905)
Chemicals or Allied Products	581,208	Electrical Equipment	(65,682)
Coal	383,033	Food or Kindred Products	(27,932)
Transportation Equipment	374,815	Apparel or Related Products	(17,209)
Waste or Scrap Materials	259,403	Metallic Ores	(5,233)
Furniture or Fixtures	235,138	Leather or Leather Products	(4,329)
Misc Manufacturing Products	214,093	Misc Freight Shipments	(1,887)
Clay, Concrete, Glass or Stone	205,427	Textile Mill Products	(1,828)
Fabricated Metal Products	158,959	Tobacco Products	(248)
Rail Intermodal Drayage to Ramp	99,315	Air Freight Drayage to Airport	(54)
Rail Intermodal Drayage from Ramp	88,518		
Petroleum or Coal Products	60,242		
Pulp, Paper or Allied Products	56,979		
Rubber or Misc Plastics	53,785		
Instrument, Photo Equip, Optical Eq	25,040		
Shipping Containers	23,882		
Misc Mixed Shipments	16,448		
Printed Matter	11,886		
Air Freight Drayage from Airport	3,388		
Freight Forwarder Traffic	2,546		
Fresh Fish or Marine Products	2,280		
Ordnance or Accessories	318		
Forest Products	118		
Small Packaged Freight Shipments	7		
	8,955,429		(4,150,702)
Net Change = 4,804,727			

Integrating the forecasts for 2012 and 2017 shows the impact of the 2008/09 recession. The decrease in both Inbound **(Exhibit 50)** and Outbound **(Exhibit 51)** commodity tonnage reflects a decrease in demand for 2012 with gradual increases in 2017 indicating the economy is recovering to the status prior to the recession. By 2027 overall growth is positive again. The construction and home building industries, whether regional or nationwide, are a large consumer of nonmetallic minerals (sand, gravel, cement, etc.) and lumber. The slowing of construction during a recession creates less of a demand and a following reduction in production output for these products.

Exhibit 50: 2007, 2012, 2017 and 2027 IPH Study Area's Inbound Commodity Growth (all Counties)

Inbound Directions: All IPH Counties: All Directions From All Origins
Inbound Flows: All Trade Flows from All Countries
Inbound Modes: Truck and Rail: All Types

Top 20 Inbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Nonmetallic Minerals	7,493,802	(21.58%)	5,876,496	17.92%	6,929,464	23.73%	8,573,537
Secondary Traffic	6,535,846	(3.43%)	6,311,421	13.36%	7,154,400	41.08%	10,093,759
Lumber or Wood Products	5,836,217	(22.77%)	4,507,240	1.53%	4,576,412	0.64%	4,605,671
Coal	2,576,159	4.50%	2,692,083	11.77%	3,009,023	11.88%	3,366,502
Farm Products	2,440,247	2.55%	2,502,554	4.63%	2,618,417	8.43%	2,839,086
Clay, Concrete, Glass or Stone	2,389,748	(14.04%)	2,054,221	9.61%	2,251,706	12.04%	2,522,876
Food or Kindred Products	2,072,754	(3.93%)	1,991,320	7.56%	2,141,811	14.67%	2,455,931
Chemicals or Allied Products	1,824,412	(3.35%)	1,763,275	11.35%	1,963,471	17.71%	2,311,291
Petroleum or Coal Products	1,816,493	(3.47%)	1,753,372	9.19%	1,914,426	11.32%	2,131,052
Primary Metal Products	1,162,381	(2.30%)	1,135,648	12.98%	1,283,044	22.87%	1,576,452
Transportation Equipment	518,905	16.00%	601,917	17.08%	704,741	37.45%	968,689
Pulp, Paper or Allied Products	486,708	(8.47%)	445,468	7.88%	480,589	12.69%	541,568
Electrical Equipment	476,044	(2.14%)	465,836	19.66%	557,406	72.66%	962,423
Fabricated Metal Products	392,642	(10.50%)	351,414	10.52%	388,389	25.95%	489,162
Rail Intermodal Drayage from Ramp	305,408	(14.92%)	259,826	10.34%	286,688	36.41%	391,076
Machinery	225,307	(1.40%)	222,159	23.45%	274,257	56.66%	429,645
Rail Intermodal Drayage to Ramp	211,332	2.01%	215,584	18.23%	254,878	52.84%	389,558
Rubber or Misc Plastics	161,844	(3.82%)	155,663	11.05%	172,865	29.81%	224,396
Furniture or Fixtures	154,061	(4.07%)	147,788	16.48%	172,141	20.87%	208,074
Waste or Scrap Materials	147,596	12.09%	165,444	11.50%	184,472	19.96%	221,289
Total For Top 10 Commodities	34,148,059	(10.43%)	30,587,630	10.64%	33,842,174	19.60%	40,476,156
Top 10's Percent of Total	90.20%		89.46%		89.19%		87.75%
Total For Top 20 Commodities	37,227,906	(9.69%)	33,618,729	11.01%	37,318,600	21.39%	45,302,035
Top 20's Percent of Total	98.33%		98.33%		98.36%		98.22%
Total For All Commodities Inbound	37,859,620	(9.69%)	34,190,193	10.97%	37,942,504	21.56%	46,124,682

Directions: All IPH Counties: All Directions From All Origins
Flows: All Trade Flows from All Countries
Modes: Truck and Rail: All Types

Comparison Chart For **Top 10 Inbound** Commodities

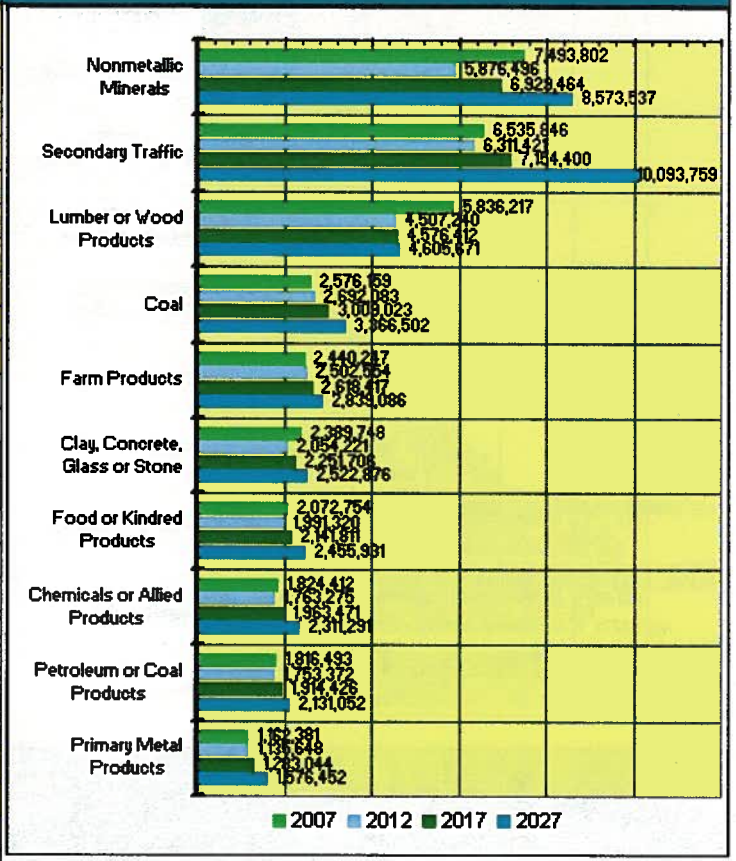


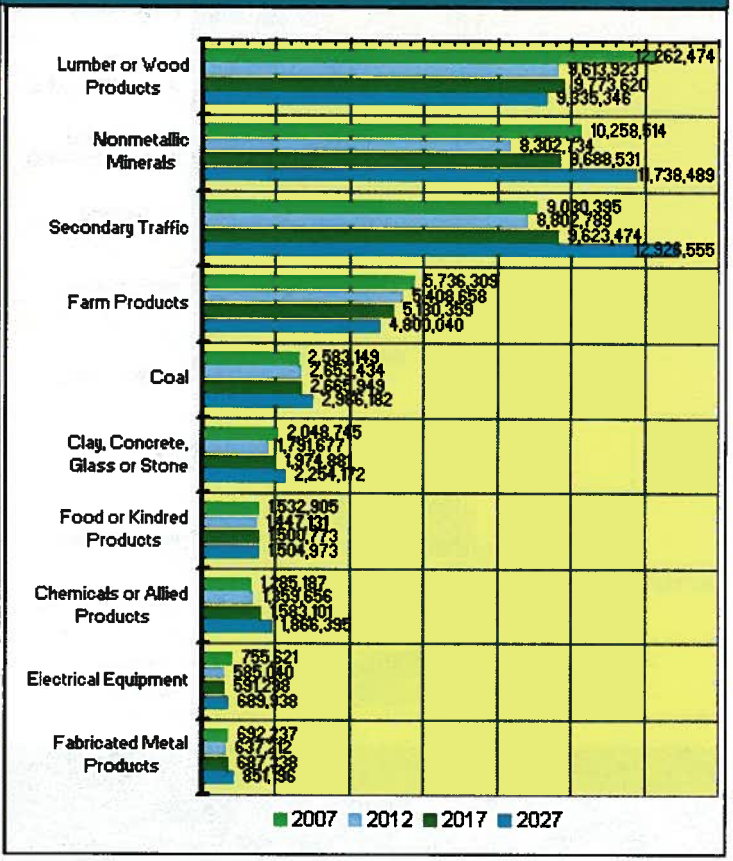
Exhibit 51: 2007, 2012, 2017 and 2027 IPH Study Area's Outbound Commodity Growth (all Counties)

Outbound Directions: All IPH Counties: All Directions to All Destinations
Outbound Flows: All Trade Flows to All Countries
Outbound Modes: Truck and Rail: All Types

Top 20 Outbound Commodities	2007 Tons	Growth % ►	2012 Tons	Growth % ►	2017 Tons	Growth % ►	2027 Tons
Lumber or Wood Products	12,262,474	(21.60%)	9,613,923	1.66%	9,773,620	(4.48%)	9,335,346
Nonmetallic Minerals	10,258,514	(19.06%)	8,302,734	16.69%	9,688,531	21.16%	11,738,489
Secondary Traffic	9,030,395	(2.52%)	8,802,789	9.32%	9,623,474	34.32%	12,926,555
Farm Products	5,736,309	(5.71%)	5,408,658	(5.15%)	5,130,359	(6.44%)	4,800,040
Coal	2,583,149	2.72%	2,653,434	0.47%	2,665,949	11.26%	2,966,182
Clay, Concrete, Glass or Stone	2,048,745	(12.55%)	1,791,677	10.23%	1,974,881	14.14%	2,254,172
Food or Kindred Products	1,532,905	(5.60%)	1,447,131	3.71%	1,500,773	0.28%	1,504,973
Chemicals or Allied Products	1,285,187	5.79%	1,359,656	16.43%	1,583,101	17.89%	1,866,395
Electrical Equipment	755,621	(22.57%)	585,040	1.07%	591,298	16.68%	689,938
Fabricated Metal Products	692,237	(7.95%)	637,212	7.87%	687,338	23.84%	851,196
Pulp, Paper or Allied Products	685,912	(6.36%)	642,262	7.82%	692,509	7.28%	742,891
Machinery	678,738	(2.08%)	664,620	26.99%	843,996	66.02%	1,401,205
Primary Metal Products	630,611	(4.13%)	604,550	(13.85%)	520,813	(10.20%)	467,706
Transportation Equipment	486,302	14.33%	555,999	14.87%	638,681	34.83%	861,116
Waste or Scrap Materials	424,864	(0.15%)	424,242	15.14%	488,457	40.09%	684,267
Petroleum or Coal Products	347,766	(9.76%)	313,812	16.98%	367,112	11.14%	408,008
Rail Intermodal Drayage from Ramp	316,179	(14.94%)	268,945	10.33%	296,727	36.39%	404,697
Furniture or Fixtures	286,280	6.42%	304,658	25.33%	381,834	36.56%	521,418
Rail Intermodal Drayage to Ramp	117,998	1.99%	120,349	18.31%	142,380	52.63%	217,312
Rubber or Misc Plastics	107,609	(1.43%)	106,067	16.62%	123,699	30.47%	161,395
Total For Top 10 Commodities	46,185,534	(12.09%)	40,602,255	6.45%	43,219,324	13.22%	48,933,286
Top 10's Percent of Total	91.18%		90.27%		89.76%		88.24%
Total For Top 20 Commodities	50,267,793	(11.26%)	44,607,757	6.97%	47,715,531	14.85%	54,803,302
Top 20's Percent of Total	99.24%		99.17%		99.10%		98.82%
Total For All Commodities Outbound	50,652,329	(11.20%)	44,978,840	7.05%	48,147,937	15.18%	55,457,056

Directions: All IPH Counties: All Directions to All Destinations
Flows: All Trade Flows to All Countries
Modes: Truck and Rail: All Types

Comparison Chart For **Top 10 Outbound** Commodities



IMPORT AND EXPORT SUMMARY

NAFTA IMPORT FLOWS

NAFTA imports of 6.4 million tons **(Exhibit 52)** represented 25 percent of the 2007 total of 25.6 million inbound tons (from Exhibit 1) that were shipped into the IPH study area. Canada shipped 99.5 percent of the imports into the IPH study area. Most imports originated in British Columbia and Alberta and are destined to Spokane County. Rail moved 53.9 percent of the inbound tonnage. The minimal amount of imports from Mexico all arrived by truck. The NAFTA tonnage below is included in the tonnage totals in the Inbound and Outbound tables **(Exhibits 8 through 33)**.

Exhibit 52: 2007 NAFTA Import Tonnage

2007 Tons Imported From NAFTA Origins:			
Origin Province/State	Truck	Rail	Total
British Columbia, BC	2,019,419	1,327,927	3,347,346
Alberta, AB	503,479	1,667,132	2,170,611
Saskatchewan, NB	55,672	356,014	411,686
Ontario, ON	203,837	42,644	246,481
Quebec, PQ	109,159		109,159
Manitoba, MB	15,774	44,146	59,920
New Brunswick, NB	25,151		25,151
Nova Scotia, NS	5,040		5,040
Newfoundland, NL	677		677
Prince Edward Island, PE	354		354
From Canada Total	2,938,563	3,437,863	6,376,426
Mexico, MEX	7,694		7,694
Distrito Federal, DF	6,185		6,185
Chihuahua, CHI	4,114		4,114
Veracruz, VER	3,357		3,357
Nuevo Leon, NUL	3,236		3,236
Jalisco, JAL	2,350		2,350
Coahuila De Zaragoza, COA	1,066		1,066
Guanajuato, GUA	741		741
Tamaulipas, TAM	724		724
Michoacan, MIC	509		509
Puebla, PUE	396		396
Sinaloa, SIN	289		289
San Luis Potosi, SLP	288		288
Sonora, SON	146		146
Baja California Norte, BCN	142		142
Queretaro, QUE	97		97
Hidalgo, HID	74		74
Morelos, MOR	45		45
Aguascalientes, AGS	21		21
Tlaxcala, TLX	9		9
Durango, DUR	8		8
From Mexico Total	31,491		31,491
NAFTA Total	2,970,055	3,437,863	6,407,917
Canada Percentage	98.9%	100.0%	99.5%
Mexico Percentage	1.1%		0.5%

2007 NAFTA Import Tons Received By IPH Destinations:			
Destination County	Truck	Rail	Total
Spokane County, WA	717,607	2,097,020	2,814,627
Adams County, WA	162,809	363,913	526,722
Nez Perce County, ID	65,413	358,063	423,476
Kootenai County, ID	224,835	173,394	398,229
Garfield County, WA	126,826	259,331	386,157
Whitman County, WA	245,272	112,793	358,066
Stevens County, WA	278,559		278,559
Ferry County, WA	191,764		191,764
Pend Oreille County, WA	176,557	10,319	186,876
Lincoln County, WA	155,490	15,244	170,734
Asotin County, WA	168,442		168,442
Columbia County, WA	162,370		162,370
Bonner County, ID	98,099		98,099
Boundary County, ID	23,621	26,985	50,606
Lewis County, ID	28,378	20,800	49,178
Latah County, ID	36,231		36,231
Benewah County, ID	31,139		31,139
Clearwater County, ID	24,175		24,175
Shoshone County, ID	20,976		20,976
From Canada Total	2,938,563	3,437,863	6,376,426
Spokane County, WA	24,350		24,350
Kootenai County, ID	1,857		1,857
Nez Perce County, ID	1,135		1,135
Whitman County, WA	1,022		1,022
Bonner County, ID	743		743
Stevens County, WA	632		632
Lincoln County, WA	420		420
Latah County, ID	379		379
Asotin County, WA	330		330
Adams County, WA	265		265
Benewah County, ID	130		130
Clearwater County, ID	107		107
Shoshone County, ID	62		62
Boundary County, ID	50		50
Pend Oreille County, WA	6		6
Ferry County, WA	2		2
From Mexico Total	31,491		31,491
From NAFTA Total	2,970,055	3,437,863	6,407,917
Canada Percentage	98.9%	100.0%	99.5%
Mexico Percentage	1.1%		0.5%

NAFTA EXPORT FLOWS

The IPH exports 4.6 million tons **(Exhibit 53)** to Canada and Mexico. This represented 11.6 percent of the 2007 total of 39.9 million outbound tons (from Exhibit 1). Canada received 94.6 percent of the exports. Most of the exports originated in Spokane and Stevens Counties and were destined to British Columbia. Truck moved 95.7 percent of the outbound tonnage to Canada. The minimal exports to Mexico are all shipped by truck.

Exhibit 53: 2007 NAFTA Export Tonnage

2007 Import Tons Shipped From NAFTA Origins:			
Origin Province/State	Truck	Rail	Total
British Columbia, BC	2,019,419	1,327,927	3,347,346
Alberta, AB	503,479	1,667,132	2,170,611
Saskatchewan, NB	55,672	356,014	411,686
Ontario, ON	203,837	42,644	246,481
Quebec, PQ	109,159		109,159
Manitoba, MB	15,774	44,146	59,920
New Brunswick, NB	25,151		25,151
Nova Scotia, NS	5,040		5,040
Newfoundland, NL	677		677
Prince Edward Island, PE	354		354
From Canada Total	2,938,563	3,437,863	6,376,426
Mexico, MEX	7,694		7,694
Distrito Federal, DF	6,185		6,185
Chihuahua, CHI	4,114		4,114
Veracruz, VER	3,357		3,357
Nuevo Leon, NUL	3,236		3,236
Jalisco, JAL	2,350		2,350
Coahuila De Zaragoza, COA	1,066		1,066
Guanajuato, GUA	741		741
Tamaulipas, TAM	724		724
Michoacan, MIC	509		509
Puebla, PUE	396		396
Sinaloa, SIN	289		289
San Luis Potosi, SLP	288		288
Sonora, SON	146		146
Baja California Norte, BCN	142		142
Queretaro, QUE	97		97
Hidalgo, HID	74		74
Morelos, MOR	45		45
Aguascalientes, AGS	21		21
Tlaxcala, TLX	9		9
Durango, DUR	8		8
From Mexico Total	31,491		31,491
NAFTA Total	2,970,055	3,437,863	6,407,917

Canada Percentage	98.9%	100.0%	99.5%
Mexico Percentage	1.1%		0.5%

2007 NAFTA Import Tons Received By IPH Counties:			
Destination County	Truck	Rail	Total
Spokane County, WA	717,607	2,097,020	2,814,627
Adams County, WA	162,809	363,913	526,722
Nez Perce County, ID	65,413	358,063	423,476
Kootenai County, ID	224,835	173,394	398,229
Garfield County, WA	126,826	259,331	386,157
Whitman County, WA	245,272	112,793	358,066
Stevens County, WA	278,559		278,559
Ferry County, WA	191,764		191,764
Pend Oreille County, WA	176,557	10,319	186,876
Lincoln County, WA	155,490	15,244	170,734
Asotin County, WA	168,442		168,442
Columbia County, WA	162,370		162,370
Bonner County, ID	98,099		98,099
Boundary County, ID	23,621	26,985	50,606
Lewis County, ID	28,378	20,800	49,178
Latah County, ID	36,231		36,231
Benewah County, ID	31,139		31,139
Clearwater County, ID	24,175		24,175
Shoshone County, ID	20,976		20,976
From Canada Total	2,938,563	3,437,863	6,376,426
Spokane County, WA	24,350		24,350
Kootenai County, ID	1,857		1,857
Nez Perce County, ID	1,135		1,135
Whitman County, WA	1,022		1,022
Bonner County, ID	743		743
Stevens County, WA	632		632
Lincoln County, WA	420		420
Latah County, ID	379		379
Asotin County, WA	330		330
Adams County, WA	265		265
Benewah County, ID	130		130
Clearwater County, ID	107		107
Shoshone County, ID	62		62
Boundary County, ID	50		50
Pend Oreille County, WA	6		6
Ferry County, WA	2		2
From Mexico Total	31,491		31,491
From NAFTA Total	2,970,055	3,437,863	6,407,917

Canada Percentage	98.9%	100.0%	99.5%
Mexico Percentage	1.1%		0.5%

2007 IMPORT AND EXPORT COMMODITY FLOWS BETWEEN THE IPH AND CANADA

Total import tons from Canada into the IPH study area were 6.4 million tons in 2007. Imports of the top ten commodities from the top five Provinces **(Exhibit 54)** were 6.1 million tons or 95.6 percent of the total tonnage. The top commodities imported include chemicals, petroleum products, lumber and wood products, paper and pulp, food products and clay products. The majority originate in British Columbia or Alberta.

Total export tons to Canada from the IPH study area counties were 4.5 million tons in 2007. Exports of the top ten commodities from the top five Counties were 3.5 million tons or 77.3 percent of the total. The top commodities imported include farm and food products, lumber, wood, paper and pulp, and nonmetallic minerals. The majority originate in Spokane and Stevens County.

Exhibit 54: 2007 Canadian Import and Export Tonnage

2007 IPH Import Tons from Canada
Top 5 Export Provinces With Top 10 Commodities

Origin Province	Commodity	Truck	Rail	Total
British Columbia, BC	Clay, Concrete, Glass Or Stone	296,577	582,165	878,742
	Lumber Or Wood Products	566,304	218,246	784,550
	Waste Or Scrap Materials	237,027	203,586	440,613
	Chemicals Or Allied Products	186,234	233,286	419,520
	Food Or Kindred Products	210,114		210,114
	Pulp, Paper Or Allied Products	93,483	51,303	144,786
	Farm Products	122,326		122,326
	Nonmetallic Minerals	104,562		104,562
	Primary Metal Products	31,724	35,200	66,924
	Fresh Fish Or Marine Products	35,376		35,376
Alberta, AB	Chemicals Or Allied Products	154,745	629,696	784,441
	Petroleum Or Coal Products	10,423	708,973	719,396
	Pulp, Paper Or Allied Products	18,601	196,745	215,346
	Lumber Or Wood Products	25,878	108,671	134,549
	Farm Products	94,493		94,493
	Food Or Kindred Products	60,375		60,375
	Waste Or Scrap Materials	20,515	23,047	43,563
	Nonmetallic Minerals	40,119		40,119
	Clay, Concrete, Glass Or Stone	25,738		25,738
	Crude Petrol. Or Natural Gas	21,629		21,629
Saskatchewan, NB	Petroleum Or Coal Products	730	201,066	201,796
	Food Or Kindred Products	7,638	92,224	99,862
	Chemicals Or Allied Products	16,126	62,723	78,849
	Farm Products	18,910		18,910
	Primary Metal Products	4,164		4,164
	Lumber Or Wood Products	1,882		1,882
	Nonmetallic Minerals	1,774		1,774
	Waste Or Scrap Materials	1,727		1,727
	Machinery	1,485		1,485
	Rubber Or Misc Plastics	734		734

2007 IPH Export Tonnage To Canada
Top 5 IPH Origin Counties With Top 10 Commodities

IPH Origin County	Commodity	Truck	Rail	Total
Spokane County, WA	Transportation Equipment	235,826		235,826
	Chemicals Or Allied Products	201,460		201,460
	Food Or Kindred Products	162,243		162,243
	Lumber Or Wood Products	131,487		131,487
	Clay, Concrete, Glass Or Stone	100,987	28,827	129,813
	Electrical Equipment	123,102		123,102
	Petroleum Or Coal Products	87,857		87,857
	Machinery	80,893		80,893
	Farm Products	75,894		75,894
	Pulp, Paper Or Allied Products	74,139		74,139
Stevens County, WA	Nonmetallic Minerals	357,929	339,136	697,065
	Lumber Or Wood Products	233,110		233,110
	Waste Or Scrap Materials	98,821		98,821
	Pulp, Paper Or Allied Products	26,663		26,663
	Farm Products	24,946		24,946
	Fresh Fish Or Marine Products	13,018		13,018
	Fabricated Metal Products	8,193		8,193
	Metallic Ores	2,745		2,745
	Ordnance Or Accessories	1,211		1,211
	Machinery	947		947
Adams County, WA	Farm Products	363,012		363,012
	Food Or Kindred Products	21,600		21,600
	Waste Or Scrap Materials	6,594		6,594
	Chemicals Or Allied Products	1,786		1,786
	Metallic Ores	1,658		1,658
	Clay, Concrete, Glass Or Stone	1,345		1,345
	Fresh Fish Or Marine Products	851		851
	Pulp, Paper Or Allied Products	298		298
	Machinery	94		94
	Forest Products	16		16

2007 IPH Import Tons from Canada (Continued) Top 5 Export Provinces With Top 10 Commodities				
Origin Province	Commodity	Truck	Rail	Total
Ontario, ON	Pulp, Paper Or Allied Products	97,315	30,756	128,071
	Waste Or Scrap Materials	27,396		27,396
	Transportation Equipment	7,831	11,887	19,718
	Machinery	13,541		13,541
	Chemicals Or Allied Products	12,634		12,634
	Food Or Kindred Products	11,900		11,900
	Electrical Equipment	5,910		5,910
	Nonmetallic Minerals	5,752		5,752
	Lumber Or Wood Products	5,259		5,259
	Rubber Or Misc Plastics	4,910		4,910
Quebec, PQ	Chemicals Or Allied Products	35,890		35,890
	Pulp, Paper Or Allied Products	31,391		31,391
	Food Or Kindred Products	9,006		9,006
	Transportation Equipment	7,586		7,586
	Primary Metal Products	5,418		5,418
	Machinery	4,597		4,597
	Nonmetallic Minerals	4,083		4,083
	Rubber Or Misc Plastics	3,228		3,228
	Lumber Or Wood Products	1,724		1,724
	Misc Manufacturing Products	1,183		1,183

2007 IPH Export Tonnage To Canada (Continued) Top 5 IPH Origin Counties With Top 10 Commodities				
IPH Origin County	Commodity	Truck	Rail	Total
Boundary County, ID	Clay, Concrete, Glass Or Stone		136,722	136,722
	Transportation Equipment		63,139	63,139
	Farm Products	876	50,546	51,422
	Lumber Or Wood Products	18,947	24,478	43,424
	Rubber Or Misc Plastics		21,111	21,111
	Primary Metal Products	51	17,669	17,720
	Chemicals Or Allied Products	38	14,542	14,580
	Petroleum Or Coal Products	2,107		2,107
	Metallic Ores	1,322		1,322
	Food Or Kindred Products	591		591
Kootenai County, ID	Machinery	192,142		192,142
	Primary Metal Products	29,213		29,213
	Lumber Or Wood Products	23,109		23,109
	Pulp, Paper Or Allied Products	19,609		19,609
	Food Or Kindred Products	9,439		9,439
	Metallic Ores	8,608		8,608
	Misc Manufacturing Products	5,321		5,321
	Clay, Concrete, Glass Or Stone	3,801		3,801
	Farm Products	3,412		3,412
	Transportation Equipment	2,236		2,236

2007 Import and Export Commodity Flows between the IPH Study Area and Mexico

Total import tons from Mexico into the IPH study area were 31,491 tons in 2007. Imports of the top ten commodities from the top five Mexican States **(Exhibit 55)** were 24,381 tons, or 77.7 percent of the total tonnage. Imports were very diversified and included furniture, chemicals, food, machinery and equipment.

Total export tons to Mexico from the IPH study area were 168,468 tons in 2007. Exports of the top ten commodities from the top five Counties were 138,660 tons, or 82.3 percent of the total. The top commodities imported include farm and food products, lumber, wood, paper and pulp, and machinery. The majority originates in Spokane and Kootenai County.

Exhibit 55: 2007 Mexican Import and Export Tonnage

2007 IPH Import Tons from Mexico Top 5 Export States With Top 10 Commodities				
Origin MX State	Commodity	Truck	Rail	Total
Mexico, MEX	Furniture Or Fixtures	2,385	2,385	2,385
	Electrical Equipment	1,540	1,540	1,540
	Transportation Equipment	824	824	824
	Printed Matter	666	666	666
	Food Or Kindred Products	499	499	499
	Clay, Concrete, Glass Or Stone	481	481	481
	Chemicals Or Allied Products	415	415	415
	Primary Metal Products	381	381	381
	Machinery	214	214	214
	Pulp, Paper Or Allied Products	147	147	147
Distrito Federal, DF	Furniture Or Fixtures	1,956	1,956	1,956
	Chemicals Or Allied Products	1,462	1,462	1,462
	Electrical Equipment	904	904	904
	Transportation Equipment	651	651	651
	Primary Metal Products	301	301	301
	Food Or Kindred Products	286	286	286
	Pulp, Paper Or Allied Products	197	197	197
	Clay, Concrete, Glass Or Stone	187	187	187
	Machinery	144	144	144
	Fabricated Metal Products	38	38	38
Chihuahua, CHI	Furniture Or Fixtures	3,194	3,194	3,194
	Clay, Concrete, Glass Or Stone	537	537	537
	Machinery	263	263	263
	Waste Or Scrap Materials	63	63	63
	Chemicals Or Allied Products	23	23	23
	Transportation Equipment	16	16	16
	Apparel Or Related Products	13	13	13
	Lumber Or Wood Products	5	5	5

2007 IPH Export Tonnage To Mexico Top 5 IPH Origin Counties With Top 10 Commodities				
Origin County	Commodity	Truck	Rail	Total
Spokane County, WA	Farm Products	13,652		13,652
	Pulp, Paper Or Allied Products	8,419		8,419
	Machinery	6,104		6,104
	Waste Or Scrap Materials	4,989		4,989
	Food Or Kindred Products	3,856		3,856
	Electrical Equipment	2,837		2,837
	Chemicals Or Allied Products	2,506		2,506
	Transportation Equipment	807		807
	Lumber Or Wood Products	794		794
	Textile Mill Products	479		479
Kootenai County, ID	Food Or Kindred Products	14,954		14,954
	Pulp, Paper Or Allied Products	12,468		12,468
	Farm Products	1,494		1,494
	Transportation Equipment	1,169		1,169
	Chemicals Or Allied Products	1,011		1,011
	Machinery	671		671
	Waste Or Scrap Materials	310		310
	Lumber Or Wood Products	274		274
	Electrical Equipment	190		190
	Primary Metal Products	109		109
Nez Perce County, ID	Food Or Kindred Products	11,083		11,083
	Pulp, Paper Or Allied Products	10,723		10,723
	Transportation Equipment	1,006		1,006
	Farm Products	874		874
	Chemicals Or Allied Products	868		868
	Machinery	523		523
	Waste Or Scrap Materials	268		268
	Lumber Or Wood Products	227		227
	Electrical Equipment	146		146
	Rubber Or Misc Plastics	49		49

2007 IPH Import Tons from Mexico (Continued) Top 5 Export States With Top 10 Commodities				
Origin MX State	Commodity	Truck	Rail	Total
Veracruz, VER	Farm Products	2,508	2,508	2,508
	Food Or Kindred Products	498	498	498
	Primary Metal Products	285	285	285
	Fabricated Metal Products	25	25	25
	Pulp, Paper Or Allied Products	17	17	17
	Chemicals Or Allied Products	17	17	17
	Transportation Equipment	7	7	7
Nuevo Leon, NUL	Primary Metal Products	1,107	1,107	1,107
	Food Or Kindred Products	736	736	736
	Fabricated Metal Products	403	403	403
	Furniture Or Fixtures	346	346	346
	Transportation Equipment	256	256	256
	Electrical Equipment	170	170	170
	Clay, Concrete, Glass Or Stone	110	110	110
	Pulp, Paper Or Allied Products	48	48	48
	Machinery	43	43	43
	Waste Or Scrap Materials	13	13	13

2007 IPH Export Tonnage To Mexico (Continued) Top 5 IPH Origin Counties With Top 10 Commodities				
Origin County	Commodity	Truck	Rail	Total
Bonner County, ID	Food Or Kindred Products	10,785		10,785
	Pulp, Paper Or Allied Products	10,440		10,440
	Transportation Equipment	979		979
	Farm Products	849		849
	Chemicals Or Allied Products	845		845
	Machinery	440		440
	Waste Or Scrap Materials	239		239
	Lumber Or Wood Products	219		219
	Electrical Equipment	63		63
	Rubber Or Misc Plastics	48		48
Whitman County, WA	Farm Products	4,242		4,242
	Waste Or Scrap Materials	1,524		1,524
	Pulp, Paper Or Allied Products	1,416		1,416
	Machinery	1,195		1,195
	Food Or Kindred Products	1,045		1,045
	Chemicals Or Allied Products	602		602
	Electrical Equipment	468		468
	Transportation Equipment	192		192
	Textile Mill Products	109		109
	Lumber Or Wood Products	102		102

CONCLUSIONS

There are several key observations about freight movement by mode, growth by county cluster and commodity tonnage changes within the IPH study area.

Freight Movements by Mode

- Freight on the highways in 2007 for internal, inbound and outbound was at 61.4 million tons and is forecast to grow to 72.8 million tons by 2027, an increase of 18.5 percent (Exhibit 7: Summary of IPH Study Area Inbound and Outbound Freight Flows).
- Freight on the rails in 2007 for internal, inbound and outbound was at 13.3 million tons and is forecast to grow to 13.4 million tons by 2027, an increase of 1 percent (Exhibit 11: 2007 and 2027 Rail Carload and Intermodal Summary, on the continued page).
- Carload tonnage will decrease by 99,000 tons while intermodal will increase by 228,000 tons. The TRANSEARCH™ rail forecast for inbound and outbound tonnage indicates in 2007 rail carload tonnage was at 12.7 million tons and will be at 12.6 tons in 2027, a decrease of 0.8 percent.
- Intermodal tonnage was at 534,000 tons in 2007 and at 763,000 tons in 2027 for an increase of 42.7 percent.

The changes in freight movement tonnage is a clear indication that freight is switching even more toward highway trailers and intermodal trailers and containers and away from rail carload service. At the public stakeholder freight forums, several participants mentioned that carload service with the short line railroads is decreasing as the number of lumber mills declines.

Tonnage Growth by County Cluster

- The Northern Counties will grow from 16.2 million tons in 2007 to 17.2 million tons in 2027, a growth rate of 6.2 percent over 20 years (Exhibit 9: Tonnage Summary for Northern and Central Clusters). For the Northern Counties most of the growth will occur with inbound and outbound freight with the west and to Canada.
- The Central Counties will grow from 53.4 million tons in 2007 to 57.9 million tons in 2027 or 8.4 percent. The Central Counties will have increases with the west, east, and south directions.
- The Southern Counties will grow from 18.8 million tons in 2007 to 26.4 million tons in 2027, or 40.4 percent. Most of the growth in highway tonnage will occur in the Southern Counties either as internal circulation at 3.3 million tons or approximately 40 percent, or as outbound shipments to the West at 2.7 million tons for over 109 percent.

Inbound and Outbound Commodity Flows

Key observations about commodity flows for the IPH study area indicate that:

- Inbound commodity total tonnage in 2007 was 37.8 million tons and is forecast to grow by 8.3 million tons by 2027 to reach 46.1 million tons. (Exhibit 50: 2007, 2012, 2017 and 2027 IPH Study Area's Inbound Commodity Growth (all Counties), and Exhibit 48: 2027 Over 2007 IPH's Inbound Commodity Growth).
- Outbound commodities tonnage total tonnage in 2007 was 50.6 million tons and is forecast to grow by 4.8 million tons by 2027 to reach 55.4 million tons. (Exhibit 51: 2007, 2012, 2017 and 2027 IPH Study Area's Outbound Commodity Growth (all Counties), and Exhibit 49: 2027 Over 2007 IPH Study Area's Outbound Commodity Growth)

Commodities Flows Related to Natural Resources

The commodities are produced from mining, farming and forestry activities.

- Lumber and wood products are the largest natural resource commodity by tonnage shipped.
  - ↓ Inbound tonnage for 2007 was at 5.8 million tons and is forecast to decrease by 21.08 percent by 2027 down to 4.6 million tons.
  - ↓ Outbound tonnage for 2007 was at 12.2 million tons and is forecast to decrease by 23.87 percent by 2027 down to 9.3 million tons.
- Nonmetallic minerals are the second largest natural resource commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 7.5 million tons and is forecast to grow by 14.41 percent by 2027 to reach 8.5 million tons.
  - ↑ Outbound tonnage for 2007 was at 10.2 million tons and is forecast to grow by 14.43 percent by 2027 to reach 11.7 million tons.
- Farm products are the third largest natural resource commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 2.2 million tons and is forecast to grow by 16.34 percent by 2027 to reach 2.8 million tons.
  - ↓ Outbound tonnage for 2007 was at 5.7 million tons and is forecast to decrease by 16.32 percent by 2027 down to 4.8 million tons.
- Clay, Concrete, glass or stone products are the fourth largest natural resource commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 2.3 million tons and is forecast to grow by 5.57 percent by 2027 to reach 2.5 million tons.
  - ↑ Outbound tonnage for 2007 was at 2.0 million tons and is forecast to grow by 10.03 percent by 2027 to reach 2.2 million tons.
- Food and kindred products are the fifth largest natural resource commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 2.1 million tons and is forecast to grow by 18.49 percent by 2027 to reach 2.4 million tons.
  - ↓ Outbound tonnage for 2007 was at 1.5 million tons and is forecast to decrease by 1.82 percent by 2027 staying around 1.5 million tons.

- Petroleum and coal products are the sixth largest natural resource commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 1.8 million tons and is forecast to grow by 17.32 percent by 2027 to reach 2.1 million tons.
  - ↑ Outbound tonnage for 2007 was at 347,000 tons and is forecast to grow by 17.32 percent by 2027 to reach 408,000 tons.

Commodities Flows Related to Transportation and Logistics Activities

The commodities are involved in transportation related activities such as pick-ups and deliveries, warehousing and logistics.

- Secondary freight is the largest transportation related commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 6.5 million tons and is forecast to grow by 54.44 percent by 2027 to reach 10.1 million tons.
  - ↑ Outbound tonnage for 2007 was at 9.0 million tons and is forecast to grow by 43.14 percent by 2027 to reach 12.9 million tons.
- Rail intermodal drayage to and from ramps is included in transportation related commodities by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 516,000 tons and is forecast to grow by 51.07 percent by 2027 to reach 780,000 tons.
  - ↑ Outbound tonnage for 2007 was at 434,000 tons and is forecast to grow by 43.26 percent by 2027 to reach 622,000 tons.

Commodities Flows Related to Manufacturing or Value-added Processes

The commodities are involved in activities related to manufacturing or value-added processes.

- Chemical or allied products are the largest manufacturing or value-added commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 1.8 million tons and is forecast to grow by 26.69 percent by 2027 to reach 2.3 million tons.
  - ↑ Outbound tonnage for 2007 was at 1.2 million tons and is forecast to grow by 45.22 percent by 2027 to reach 1.8 million tons.
- Primary metal products are the largest manufacturing or value-added commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 1.1 million tons and is forecast to grow by 35.62 percent by 2027 to reach 1.5 million tons.
  - ↓ Outbound tonnage for 2007 was at 630,000 tons and is forecast to decrease by 25.83 percent by 2027 down to 467,000 tons.
- Electrical equipment is the largest manufacturing or value-added commodity by tonnage shipped.
  - ↑ Inbound tonnage for 2007 was at 476,000 tons and is forecast to grow by 102.17 percent by 2027 to reach 962,000 tons.

- Outbound tonnage for 2007 was at 756,000 tons and is forecast to decrease by 8.69 percent by 2027 down to 689,000 tons.

- Fabricated metal products are the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 392,000 tons and is forecast to grow by 24.58 percent by 2027 to reach 489,000 tons.
  - Outbound tonnage for 2007 was at 692,000 tons and is forecast to grow by 22.96 percent by 2027 to reach 851,000 tons.
- Pulp, paper or allied products are the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 486,000 tons and is forecast to grow by 11.27 percent by 2027 to reach 541,000 tons.
  - Outbound tonnage for 2007 was at 686,000 tons and is forecast to grow by 8.31 percent by 2027 to reach 743,000 tons.
- Machinery is the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 225,000 tons and is forecast to grow by 90.69 percent by 2027 to reach 429,000 tons.
  - Outbound tonnage for 2007 was at 678,000 tons and is forecast to grow by 106.44 percent by 2027 to reach 1.4 million tons.
- Transportation equipment is the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 519,000 tons and is forecast to grow by 86.68 percent by 2027 to reach 968,000 tons.
  - Outbound tonnage for 2007 was at 486,000 tons and is forecast to grow by 77.07 percent by 2027 to reach 861,000 tons.
- Furniture or fixtures are the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 154,000 tons and is forecast to grow by 35.06 percent by 2027 to reach 208,000 tons.
  - Outbound tonnage for 2007 was at 286,000 tons and is forecast to grow by 82.14 percent by 2027 to reach 521,000 tons.
- Rubber or miscellaneous products are the largest manufacturing or value-added commodity by tonnage shipped.
  - Inbound tonnage for 2007 was at 162,000 tons and is forecast to grow by 38.65 percent by 2027 to reach 224,000 tons.
  - Outbound tonnage for 2007 was at 107,000 tons and is forecast to grow by 49.98 percent by 2027 to reach 161,000 tons.

APPENDIX A: DATA SOURCES AND PROCESSES USED TO CREATE TRANSEARCH™

TRANSEARCH™ is an annual, nationwide database of freight flows between U.S. county or ZIP code markets, with an overlay of flow across infrastructure. The database draws from a wide variety of data sources covering commodity volume and modal flow, including a long-term, proprietary motor carrier traffic sample, proprietary railroad data, and numerous commercial and federal government surveys, samples, and census data. To compose the database, these multiple and diverse information sources are cast together in a single, consistent format.

Development of the Database

Each annual version of the TRANSEARCH™ U.S. database begins by establishing state production volumes by industry or commodity. This information is drawn from the Census Bureau's Annual Survey of Manufactures and the Census of Manufactures. Both of these sources report production in dollars, which are converted to tons using commodity value/weight relationships maintained by Global Insight.

Once the production volumes are established, tonnages moving by rail, water, air, and pipeline[1] are netted from the totals (which serve as control totals), leaving the remaining freight volumes allocated to truck distribution patterns. Since the process begins with production data, which include items produced for both domestic and foreign consumption, export volumes are developed by the same procedure. Import volumes, drawn from US Department of Commerce data, are subsequently combined into the freight flows at the point of importation. Separate databases for NAFTA traffic are produced and offered in conjunction with the U.S. data set.

Development of Domestic Production Statistics

As national, multimodal freight databases do not readily exist depicting commodity flows in a detailed way, the data must be developed from many sources. The Global Insight TRANSEARCH™ database estimates local production and consumption of domestic transportation. By linking production and consumption patterns and modal freight flow, estimates of freight activity can be established.

Production and shipment estimates are developed from the survey and census of manufactures, which describe industrial activity by state. This information is updated to the base year through industrial production indices, and supplemented by trade association and industry reports. Shipments are localized to the level of counties using street address, employment, population data, industry reports, and proprietary freight information from freight carriers. Relationships between industries are determined with input/output patterns.

[1] Pipeline flows were excluded from TRANSEARCH™ although some of the supporting databases do report information on pipeline flows.

The chief sources of production and shipment estimates are shown **(Exhibit A 1)** along with the modes they influence. Some sources are used for certain modes of traffic and not for others; for example, port directories are employed exclusively to help localize waterway freight patterns. Railroad data in its original source (the full STB Waybill Sample) are highly localized and specific. Although some adjustment is made for through cargos, the majority of the Waybill Sample does not require further processing for presentation in the database.

Exhibit A 1: Data Elements Used in Developing Production/Consumption Patterns

Database	Used for Estimating Modal Flows
US Dept. of Commerce Census/Survey of Manufactures	*Truck, water, air*
GII Industrial Production Indices	*Truck, water, air*
Trade Association Production & Shipment Reports	*Truck, water, air*
US Geological Survey Mineral Industry Reports	*Truck, water*
GII/InfoUSA Street-Address Industrial Employment & Activity	*Truck*
County Population Data	*Truck*
Inter-Industry Trade Patterns (Input/Output Table)	*Truck, Air*
Motor Carrier Industry Financial & Operating Statistics	*Truck*
Railroad Industry Proprietary Traffic Factors	*Truck*
Private Port Directories	*Water*

Development of Domestic Modal Database Flows

Global Insight constructs the TRANSEARCH™ database from the most recent set of publicly available freight flow information. The result is a database of county-level origin-to-destination flows by commodities for seven modes of transportation: for-hire truckload, less-than-truckload, private truck, conventional rail, rail/truck intermodal, air, and water. Volume is presented in terms of tonnage, and then translated to units (such as truck counts), value, VMT and ton-miles using conversion tables and route distances. For any given county, traffic coverage will include flows that are intra-county (internal), inbound and outbound (external-internal and internal-external), and overhead (external-external).

Overhead volumes are estimated with modal routing models applied to the nationwide data. These sources are not uniform in terms of the geographic areas used, commodity definitions, units of measure, and the base years presented. The development process draws these disparate sources together, checking their completeness and basic validity, assigning commodity, geography and mode descriptions before putting them into a common format. Each mode will be explained in turn.

Railroad Freight Activities

For most applications, TRANSEARCH™ rail traffic is taken from the fully detailed (and confidential) version of the Surface Transportation Board's (STB) annual Railroad Waybill Sample. The Waybill Sample is a statistically based stratified sample of shipments terminated by U.S. rail carriers. All carriers terminating 4,000 or more carloads per year are required to report and 62 railroad systems thus are captured, encompassing all Class I and II railroads, and the more prominent short lines. (Carriers smaller than 4,000 annual loads may be sampled when they act as haulage agents for

larger railroads, in which the latter appears as the carrier of record on a shipment). The full Waybill Sample file contains detailed information on the origin, destination, commodity and volume of each sampled movement.

For this study, the STB's proprietary Carload Waybill Sample was used in the TRANSEARCH™ database. Since the full Carload Waybill Sample contains specific waybill information such as origin and termination freight station, junction points and rail carrier identification, it is not suitable for public release.[2] The analysis in the working papers and technical memoranda was presented in summary format to not divulge any confidential shipper or carrier information.

Major railroads share proprietary freight data with Global Insight as well. This information is not utilized in the rail flows appearing in TRANSEARCH™ but is employed indirectly to sharpen the netting process by which initial estimates of truck activity are derived. The proprietary sources create three advantages for the database. First, they give a more precise picture of rail activity in county markets than public editions of the Waybill Sample allow. Second, they permit the data to be corrected for the so-called rebilling problem, in which the rail carrier recording process for interchanged shipments can mask the true origins and destinations of some rail freight. Finally, the proprietary data is more timely than that available through the Waybill Sample.

For NAFTA traffic, international rail volumes and border crossing points have been incorporated. The STB Waybill Sample currently has full coverage of U.S./Canada flows, both north and south. For freight moving between Mexico and the United States, information is taken from BTS border crossing statistics and from routings suggested in the Waybill, interpreted with a rail network routing model.

Throughout the development process, carload and intermodal trailer-on-flat-car/container-on-flat-car (TOFC/COFC) traffic are maintained as separate[3] volumes. The identification of which shipments utilized TOFC/COFC services is based on intermodal record flags in the Waybill file. As illustrated in **Exhibit A 2**, intermodal freight movements consist of both truck and rail portions. For the long-haul portion of the trip, the goods are carried by rail. The shorter, drayage portion of the trip occurs on truck.

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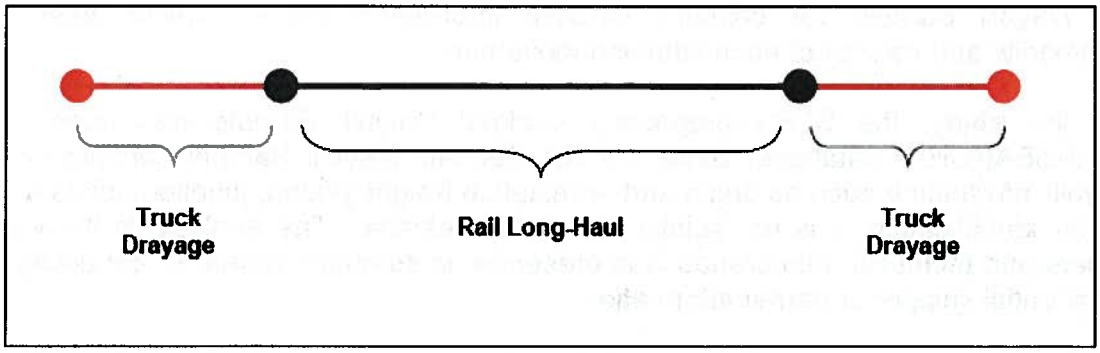
[2] STB explanation of Public Way Bill Samples, http://www.stb.dot.gov/stb/docs/Waybill/Creation of the Public Use Waybill Sample.pdf

[3] The separation of carload from intermodal traffic is not possible for U.S./Mexico freight, due to limitations in the source data.

Exhibit A 2: Intermodal Freight Movement



Freight that is classified as the mode "Intermodal" represents the rail portion of a truck-rail shipment. The origin corresponds to the point at which the shipment is put on a rail car, and the destination is the point at which a shipment is taken off the rail car. The commodities carried on rail are identified by a STCC (Standard Transportation Commodity Classification) code; while the STCC normally corresponds to a specific product, for much of the intermodal freight the commodity is identified only by the general classification FAK (Freight All Kinds) in the primary source data (the STB Waybill Sample).

TRANSEARCH™ also captures the drayage portion of rail-truck intermodal shipments. This traffic is shown in the "truckload" mode and is all identified by STCC 5020. Drayage appears both as movement from the ultimate origin (producing) point to the railroad and from the railroad's destination terminal to the consignee's ultimate destination point. On a tonnage basis, each intermodal shipment appears in the dataset as three separate records, first as a "truckload" mode movement of STCC 5020 from true origin to the railhead, then as an "intermodal" mode movement from one railhead to another, and finally as an additional "truckload" mode movement from the terminating railhead to the final destination point. When modal volumes are totaled by tons, the separate segments will cause the shipment in a sense to be "triple-counted". However, when volumes are totaled on a ton-mile basis, the miles in each truck or rail segment appear just one time, so the shipment in ton-mile terms is counted only once.

Waterborne Commerce Activities

The US Army Corps of Engineers (ACE) annually collects information on all shipments moving on the nation's waterways to support its management and planning activities. TRANSEARCH™ uses various components of the data issued by the Corps to develop its waterborne flow data. While the raw information collected is comprehensive, that released to the public is summarized in ways that mask the details of traffic flows; the data development process in TRANSEARCH™ aims to reestablish some of this detail. The primary dataset employed is the annual ACE file of waterborne commerce. This source provides state-to-state annual volumes of broad commodity groupings. Complementing these flow data are originating and terminating volumes by port and more specific commodity type, which are also provided by the ACE. The less detailed state-to-state flow data are disaggregated to the port level using the more detailed origination and termination information, supplemented by directories profiling public and

private port facilities.[4] For example, the general flow of goods from Pennsylvania to Louisiana is refined to steel products from Pittsburgh-area counties to counties in Southern Louisiana by comparison of sources. Commodity descriptions adopted by the Corps are transformed to STCC codes through data bridges Global Insight developed and maintains.

Air Cargo Activities

Air cargo represents by far the smallest portion, on a tonnage basis, of the TRANSEARCH™ Database. Air activity is constructed using BTS Airport Activity Statistics.

The BTS enplanement data report the total tonnage originating at each airport. In addition, a separate data series, BTS T-100, reports cover airport-to-airport flow volumes. The origin tonnage is then disaggregated into flows to the destination airport based on this second set of data. The data is then translated from airports to counties, based on airport location information maintained by the Federal Aviation Administration (FAA). In some cases, where there is more than one airport in a county, the data is subject to a further aggregation. Because the data is meant to portray domestic freight between origin and destination markets, adjustments are made to account for international freight, and the use of intermediate airport hubs. Consequently, air freight is captured from source airport market to consuming market, and any use of hub facilities en route is not depicted.

Commodity identification is then introduced. The Commodity Flow Survey (CFS) provides a broad level identification of commodity types. This broader detail is further refined based on the origin at the production region, and consumption at the destination region, by using full detail commodity information for each market.

Finally, TRANSEARCH™ also captures the dray portions of air freight shipments, which are the segments moved over the road to and from airports. This traffic is shown in the truck mode, and is identified by STCC 5030. This truck portion shows both the movement from ultimate origin (producing) point to an airport, and from the destination airport destination to the consignee's ultimate destination point. As with rail intermodal shipments (discussed above), each air shipment appears in the dataset as three separate records: origin truck dray from shipper to airport, aircraft line-haul, and destination truck dray. When modal volumes are totaled by tons, each shipment's tonnage will be counted three times; however, when volumes are totaled by ton-miles, each shipment mile segment is counted only once.

Truck Flow Activities

Truck freight remains the most complex mode to estimate because of its broader market areas and lack of unified databases. As mentioned earlier, the truck portion of

[4] Drayage for marine ports is captured in TRANSEARCH™, through its treatment of import and export traffic. Drayage for inland waterway ports is not captured as a standard part of the database, although it is generated on a custom basis for interested clients.

TRANSEARCH™ begins as the share of total freight not identified on other modal shipments, derived through a netting process. To develop truck estimates, Global Insight allocates the remaining freight (truck) volumes between the for-hire and private sectors of the industry based on relative volumes reported in the CFS. The for-hire segment is then split between truckload and less-than-truckload (LTL) components using industry data on the level of LTL shipments, and prior TRANSEARCH™ patterns.

At this point, the data is ready to be split into origin-to-destination flow volumes. The sources used for this processing step consist of a combination of proprietary data collected and compiled by Global Insight, and information collected and disseminated by government sources. The information from GI includes the Motor Carrier Data Exchange and databases of shipping establishments. TRANSEARCH™ elements from prior years are considered as a repository of historical patterns. The government sources are the BTS, CFS, and the Bureau of Economic Analysis (BEA) Industrial Input/Output (I/O) tables.

The TRANSEARCH™ database uses its proprietary Motor Carrier Data Exchange as the starting point and main driver for developing domestic truck flows. Carriers that participate in the Exchange program submit a summary of their annual freight flows that includes origin, destination, and volume. Commodity indications are captured through Standard Industrial Codes (SIC), carrier commodity codes, or equipment types. Freight is reported by 3-digit ZIP code, with a large subset containing the majority of shipments reported by county or 5-digit ZIP code. All of this information is provided on an origin-to-destination basis. ZIP codes are converted to counties as part of the database preparation process.

There is some variation in the sample achieved each year through this program, but in recent years it has included about 70 million[5] individual truck shipments, covering both the truckload and LTL segments of the industry. Participating carriers are primarily large truckload and LTL operators with average lengths of haul over 500 miles. However, the sample also takes in owner-operator business, portions of private carriage and dray activity, and significant amounts of regional (under 500-mile) traffic. The sampling rate is about 7 percent overall, 3 percent under 500 miles, and 1 percent under 100 miles.[6] Because the program depends on cooperation and carriers' business interests, it does not create a stratified random sample; to offset this, coverage is pursued and obtained for a broad cross section of the trucking market, including diverse industrial and geographic segments.

To supplement the Data Exchange data, Global Insight draws on proprietary datasets providing information on the specific locations of manufacturing and distribution facilities, along with profiles of their industrial output, employment and sales level. This

[5] As a point of comparison, the 1997 CFS sampled 6 mill on shipments and the 2002 CFS 3 million, and these samples were addressed to all of the modes, not just to truck.
[6] As another point of comparison, the STB Waybill Sample runs 1 to 2% - but it is a stratified random sample.

information, in conjunction with that gathered through the Motor Carrier Data Exchange, guides the establishment of origination volumes at the county level, and is relied on particularly in markets where the Data Exchange sample is small. This location information is employed further in the procedure that translates the raw Data Exchange submissions from a ZIP code to a county basis. Where the ZIP codes submitted by carriers overlap county boundaries, the relative activity levels as estimated in the facilities dataset are used in the translation process.

Just as business establishment information is used to supplement origination data, it is also used, in conjunction with the BEA Industrial I/O tables, in a similar manner to enhance the destination or consumption volumes by county. Based on the production volumes by industry derived from such data, the I/O relationships are analyzed to develop necessary input commodities and volumes that would be needed to satisfy production demands.

An initial screening and analysis of the Data Exchange information adjusts and eliminates any discrepancies in reporting formats or procedures by various participants. Summary results are also tabulated, and a variety of statistics are derived to judge the reasonableness of the data. The most important numbers that are developed are the sample rates at both the national and state levels.

The sample rates are calculated by dividing the amount of traffic reported by Data Exchange carriers by the amount of relevant truck traffic determined in earlier processing. These sample rates are then used to determine the degree to which flow pattern development will rely on either the carrier–reported patterns or historical patterns, including those from the CFS. Where the Data Exchange sample rates are most robust, the flow patterns reported by the carriers are adopted almost in their entirety. This typically covers longer-haul shipments and commodities that are moved in dry-van trailers, as this segment of the trucking industry is best represented amongst the participating carriers.

Where Data Exchange coverage is thin, CFS data (also used to distinguish the for-hire and private sectors of the trucking industry) is used more heavily. Shorter-haul truck volumes and patterns in TRANSEARCH™ show greater influence from the CFS, due to lesser coverage of this type of traffic in Data Exchange. In addition, certain kinds of non-manufactured goods transported by truck begin with this source. For example, CFS is used as the starting point for developing truck movements of ores and non-metallic minerals. County-level detail is introduced into this segment of the data through identification of specific mining locations, and local distribution patterns are modeled from CFS data that profile the lengths of haul for these commodities. Volumes are updated to current levels through industrial production indices, and are changed to reflect local production information where it is available.

Specialized Truck Flow Development

Several important classes of truck traffic are developed for TRANSEARCH™ in distinct ways: secondary shipments, agricultural products, and empty movements.

Secondary - Secondary shipments are distinguished from primary shipments in that they are steps in the distribution chain where a movement occurs after (and sometimes before) the major trip has taken place. In the TRANSEARCH™ database, primary moves may be thought of as shipments originating at locations where goods are produced or assembled and receive their Industrial Classification (NAICS or SIC) number. The terminations of these shipments are where the product or commodity comes to rest, either to be consumed or subjected to further processing. If the product moves instead to a staging point and is mixed with other products of a similar nature and then reshipped; from a data source perspective it is a secondary movement. The prior shipment may have involved a different mode of transportation, but the product carried is physically still the same as it was for the primary stage. Examples of secondary freight include shipments from warehouses and distribution centers (DCs), or to and from certain terminal facilities. Typically this is a short-haul truck activity.

Secondary freight in TRANSEARCH™ is divided into warehouse and distribution freight, and drayage. The latter was treated in the previous discussions of air and rail intermodal freight. For the former, three sources of information are used. First, TRANSEARCH™ commodity shipments inbound to markets, combined with input/output tables and analysis of certain aspects of the CFS, give a preliminary picture of volumes. Second, locations of warehouse facilities are compiled from street address establishment data and from information provided by the Public Warehouse Association. Based on employment levels and facility size where available (square footage, number of doors), GI algorithms are applied to estimate output. Finally, portions of data from the Motor Carrier Exchange program are useful for secondary shipping, and are employed to help calibrate distribution patterns. Warehouse and DC truck volumes are coded in TRANSEARCH™ with STCC code 5010.

Agriculture - County-to-county truck flows of domestic agricultural products are a vital component of transportation requirements in many parts of the nation. In TRANSEARCH™, freight of fresh produce is modeled using production data and distribution patterns historically gathered by the U.S. Department of Agriculture, and updated for current output. Otherwise, the process for truck shipments of agriculture commences with county production figures by type of crop, product or livestock obtained from the USDA, and from state sources for major agricultural states. Conversion tables are applied to translate such endemic output measurements as bushels and heads of cattle into standard tonnage measurements. Allowance is made for on-farm storage and foreign trade activity, captured elsewhere in the database. County consumption volumes are based on establishment level factors for relevant facilities, including grain elevators, processing businesses, and rail and water transfer points, and reflect output portrayed elsewhere in TRANSEARCH™. Distribution is estimated with a two-step national model that employs a gravity algorithm in its first stage, followed by iterative proportional fitting. The model is calibrated to conform to truck travel distances by use, product and body type reported in the BTS Vehicle Inventory and Use Survey (VIUS); because trucks devoted to agriculture are typically local vehicles, the VIUS Registration State can be used to understand regional distinctions. Commodities are uniformly reported in the database by 4-digit STCC code,

although several are handled at a finer level of detail to observe such distinctive distribution patterns as between corn and wheat.

One further significant segment of truck activity in non-manufactured goods captured in a different way is the movement of coal, whose freight patterns and volumes are based on those reported by the Department of Energy. Prominent coverage gaps in truck shipments of non-manufactured goods that are not filled in the standard TRANSEARCH™ dataset, but are developed for clients on a custom basis, are primary (raw) products of forests and fisheries, and haulage of waste and scrap.

Empties – Movements of trucks between the termination of one payload and the origination of the next constitute a material portion of local activity. Motor carriers strive to minimize the distance over which this occurs, and it is strongly affected by the range and class of operation for a truck fleet and the trailer types employed. All of these elements are observed in the processing of empty movements for TRANSEARCH™ which begins with county imbalances of inbound and outbound loads, and by category of trailer on a nationwide basis. A two-step model of the type used for agricultural products is adopted to resolve imbalances, drawing on empty mileage factors from VIUS, and checking results against industry factors and market conditions. Empty truck activity is reported in TRANSEARCH™ under STCC code 4221, with volumes displayed in numbers of trucks but with no associated tonnage.

Development of Domestic Flows of International Movements

International freight data in TRANSEARCH™ is largely derived from independent information sources and overlap partially with the domestic database. Export freight is embedded in U.S. TRANSEARCH™ because of its use of production statistics. Maritime imports are explicitly added. To the extent possible, NAFTA overland trade was separated from the domestic dataset. No overland imports from Mexico and Canada appear, and modal volume that clearly moves for NAFTA export also has been eliminated – but most remains embedded in border state traffic patterns.[6] Thus, between the domestic and international datasets, there is some double counting of international freight flows moving to and from inland markets. International air freight traffic is not a part of TRANSEARCH™, except for those flows between the U.S. and Canada.

Based on independent information sources, three classes of international data are used alongside data for domestic shipments: inland maritime, U.S./Mexico, and U.S./Canada. The first is left mixed with domestic activity in the U.S. database. The two classes of NAFTA traffic appear in stand-alone databases; each portrays commodity modal movements internal to the U.S., traveling between counties and international gateways, and beyond those gateways to and from foreign points[7]. International traffic that the U.S. database contains is used in the analysis of production and consumption patterns; other international traffic is treated in a separate process in the parallel databases.

[7] International traffic that the U.S. database contains is used in the analysis of production and consumption patterns; other international traffic is treated in a separate process in the parallel databases.

Inland maritime activity is the portion of international shipments traveling within the United States, to and from U.S. seaports. Substantial volumes move by rail or by the inland waterway system, and this tonnage is contained within but not fully identified among the domestic freight data for these modes. For shipments moved by road, production for export remains blended with domestic production in outbound truck volume; the data depicts significant volumes moving to port counties because of local and export demand, but do not distinguish the international from the local domestic portion. Truck movements of import volume are handled in TRANSEARCH™ as outbound flows from the seaport, based on foreign trade data and inland distribution patterns originally created for the Latin American Trade & Transportation Study (LATTS).[8] In current editions of TRANSEARCH™, historic LATTS patterns are adjusted for present-day import volumes and contemporary economic geography. The tonnage of imports trucked inland is then added to domestic truck tonnage in the database, and again is not individually presented. However, because to a large degree inland maritime flows are developed separately for import traffic, and to a lesser degree for export, they can be broken out on a custom basis for client requirements.

Mexico/U.S. Surface Freight Movements

The TRANSEARCH™ U.S./Mexico database derives from trans-border statistics produced by the US Census Bureau, under contract to the US Department of Transportation Bureau of Transportation Statistics. This source provides information on cross border shipments by truck and rail, in terms of declared value (US dollars) at customs inspection points on the border. Information on southbound shipments includes U.S. state of origin, crossing point, and Mexican state of destination. For northbound shipments, U.S. state of destination and the crossing point are shown, but origins are displayed simply as Mexico; however, physical volume (tons) is reported for these shipments, along with their value. Commodities are indicated by the Mexican version of the "harmonized" coding system.

Processing the data involves allocating the northbound traffic to Mexican State of origin. In addition, the data are converted from the Harmonized Code to STCC commodity codes and from volume units (dollars) into tons. This is done by means of a bridge table. After a review, some further checks are made during the process of converting volume units from dollars to tons. This conversion relies on a table of product values; however, adjustments are made in some instances where a dollar value is deemed more appropriate for import/export trade in a given STCC category.

The database includes both production and consumption regions in Mexico and the United States. To determine the Mexican state of origin for northbound shipments, source data are processed further. The method employed hinges on a set of tables produced by Global Insight from a variety of Mexican sources. These tables give a

[8] Flows in LATTS were first developed by Wilbur Smith Associates and Global Insight, utilizing information from PIERS (Port Import Export Reporting Service), TRANSEARCH™, and econometric analysis. A consortium of southeastern U.S. states funded the initial LATTS effort, as part of an examination of international trade activity.

quantified breakdown of all 32 states within Mexico as origin areas for world exports from Mexico. Further, each table represents an industrial group, approximating a two digit STCC code. It is assumed that Mexican exports to the United States are proportionately in the same source patterns as exports to the rest of the world.

TRANSEARCH™ for U.S./Mexico is offered on a state-to-state basis. Nevertheless, for some users the U.S. state volumes of imports from and exports to Mexico are further allocated down to the county level. This procedure utilizes domestic U.S. production and consumption levels within counties, by specific commodity types. The relative weighting of each county's inbound and outbound volumes, as a percent of a state's total volumes by specific commodity type, are used to create disaggregation factors, which are then applied to Mexican freight flows. Primary source information from the TRANSEARCH™ Data Exchange, which includes material volumes of U.S./Mexico truck traffic, is further employed as a check against flow patterns at the state and the county level. Even so, caution should be exercised, as allocation to the county level is undertaken chiefly for the purpose of developing flow routing assignments. It has limited reliability as a localized picture of U.S./Mexico traffic and information on separate border crossing activities. When applied to flow maps, the freight flows through these multiple border crossings within the same county become routed based upon the shortest flow, not necessarily through the specific gateway facility.

Canada/U.S. Freight Movements

The TRANSEARCH™ U.S./Canada database draws from original customs data obtained from Statistics Canada. In this source, all origins and destinations are defined as U.S. states or Canadian provinces. Commodities are coded in accordance with the Harmonized Commodity Description and Coding System (HS). Canada/U.S. freight flow data is translated into equivalent four-digit STCC definitions.

Five separate modes are reported: truck, rail, water, air, and other. Where the mode of transport is unknown or not clearly specified on the customs documents, the shipment is included in the "other" grouping, which is overwhelmingly dominated by pipeline shipments of crude petroleum and natural gas. In addition, the STB Railroad Waybill Sample also reports U.S. import and export freight from Canada. Waybill data are used in place of the customs information for authorized users, because of the superior detail in the original source information.

For U.S. origins and destinations, domestic traffic volumes at the county level are used to allocate the international origins and destinations[9]. This process uses the same U.S. domestic data and processing techniques that are used with the Mexican data, although the greater dispersion of Canadian shipping activity renders the resulting patterns more robust. Again, primary source information from the TRANSEARCH™ Data Exchange, which includes significant volumes of U.S./Canada truck traffic, is further employed as a check against flow patterns for U.S. counties. Canadian origins and destinations are

[9] This step is unnecessary for rail traffic based on the STB Waybill, since granular geographic information is available in the sample.

disaggregated to the metropolitan market level based on patterns of Canadian domestic truck traffic, reported by Statistics Canada. Reports identify commodities and Canadian Metropolitan Areas (CMAs). Significant portions of traffic appear in non-CMA, "remainder of Province" territories, and these residual geographic classifications also are carried forward into the international dataset. A final enhancement to the dataset is the assignment of border crossing points to each of the flows, once more using BTS reports of crossing volumes or railroad route indications from the STB.

How Freight Flows Are Routed

Once the linkages between production and transportation flows are developed, they are mapped across geo-coded modal networks for determination of overhead traffic, and for GIS display. The highway network was developed by the Oak Ridge National Laboratory (ORNL), and adapted by them for the county unit structure of the TRANSEARCH™ database. Highway routes are determined by an ORNL algorithm that selects a single, lowest impedance path between any pair of counties.[10] Impedances reflect distance, class of highway and travel speed, and tolls. The algorithm follows the same principles that guide dispatch software used by motor carriers to manage their drivers. The resulting routes are a practical representation of the path favored by trucks operating in any given county-to-county lane.[11] It is different from an assignment program in that it is not attempting to distribute a trip table according to counts on many competing routes; rather, it shows the central tendency of truck flows in a given corridor, which can then be elaborated in a local assignment process.

Rail routes are established by a Global Insight routing model that considers carrier and junction information contained in the Waybill traffic data, and contains regional and short line as well as Class I railroad track in its network. Impedances take account of line ownership, trackage and haulage rights, track types, and the operating preferences of railroads for dispatching particular classes of freight. The routing for a given county pair may follow a variety of rail paths, each with specific, associated commodity volumes.

Routing of inland waterway traffic on its network is not supplied with most deliveries of TRANSEARCH™, although it can be for clients who require it. Waterway routes are applied according to patterns established in a network table, prepared by Global Insight, for a waterway service and costing model supplied to ACE. The waterway network has few path alternatives, so a least-miles routing is adequate.[12] Mile posts in the table are associated with counties to create alignment with the freight database, but only one path is used for any pair of counties for highway and waterway flows.

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[10] One consequence of the county unit is that artificial connections are used at origin and destination, to link county centroids to the nearest network point. This causes the routes for intra-county traffic, and for traffic originating and terminating between adjacent counties, to be not really meaningful.

[11] The traffic captured in the database is U.S. domestic and international volume. Highway and rail traffic between points in Canada can use U.S. infrastructure; and traffic between Canada and Mexico certainly will; but neither appears in the dataset.

[12] The really significant alternative route is the Tennessesee-Tombigbee waterway – but this typically is a high cost operation. Normally for TRANSEARCH™, only points physically located along the Tenn-Tom system are assigned that route.

County-to-county flows of freight by air are not routed on detailed airport networks. Because the data reflects travel between origin and destination markets, flows can be represented as straight-line county-to-county connections in GIS displays. However, the use of hubs in air travel is not captured in this way, so the GIS would not depict operating routes for volumes that are subject to intermediate re-handling.

Commodity Groupings Used

Standard Transportation Commodity Codes (STCC) are used by the railroad industry to organize and present commodity information and TRANSEARCH™ has the capability to use these codes. These reasons include: 1) the suitability of STCC codes to transportation and their general adequacy of nested detail; 2) comparability to Standard Industrial Codes (SIC) used in production and consumption data; 3) convertibility from international codes; 4) continuity with historical information; and 5) use in the STB waybill data.

STCCs up to the 4-digit level of detail are employed in TRANSEARCH™ thus, in the general category of Transportation Equipment; transportation of new motor vehicles (code 3711) is distinguished from auto parts (code 3714). In addition, non-standard codes have been added by Global Insight to represent various forms of secondary truck traffic: from wholesalers, warehouses, and distribution centers (code 5010), and drayage for rail terminals and airports (codes 5020 and 5030). Commodity codes 4200 and above (chiefly describing miscellaneous categories) appear in domestic data but not in international; this is because the customs documentation that is the primary international information source routinely requires specific commodity identification in order to apply appropriate duties.

For additional information including a listing of modal data sources, inclusions/exclusions and caveats regarding the TRANSEARCH™ dataset see *Development of the* TRANSEARCH™ *Database* available from Global Insight: info@globalinsight.com.

APPENDIX B: COUNTY CLUSTER FREIGHT FLOWS: 2007 AND 2012 FORECAST

Appendix B contains tables showing freight tonnage flows for 2007 as the base year and a forecast for 2012. Flows shown are formatted the same as the main body of the report. There is a section for each of the county clusters: Northern Counties, Central Counties, and Southern Counties. Flows for each county cluster are subdivided into Inbound and Outbound. Charts depict the top ten commodities for inbound and outbound flows to easily visualize how the commodities will change over the five year forecast period.

Exhibit B 1: 2007 and 2012 Northern Counties Inbound Tonnage

Northern Counties Inbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	1,328,884	1,124,820	(204,064)	(15.4%)
Rail Only	Tonnage & Growth Rate	70,960	48,848	(22,112)	(31.2%)
Truck + Rail	Tonnage & Growth Rate	1,399,844	1,173,668	(226,176)	(16.2%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	2,836,679	2,669,026	(167,653)	(5.9%)
Rail Only	Tonnage & Growth Rate	119,400	105,988	(13,412)	(11.2%)
Truck + Rail	Tonnage & Growth Rate	2,956,079	2,775,015	(181,064)	(6.1%)
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	4,165,563	3,793,846	(371,717)	(8.9%)
Rail Only	Tonnage & Growth Rate	190,360	154,836	(35,524)	(18.7%)
Truck + Rail	Tonnage & Growth Rate	4,355,923	3,948,683	(407,240)	(9.3%)

Exhibit B 2: 2007 and 2012 Northern Counties Inbound Distribution

Northern Counties Inbound Tonnage			Local Freight Circulates within IPH Counties		Inbound from Western Origins: Routes = I-90, US2, US12, US20		Inbound from Eastern Origins: Routes = I-90, US2, US12, ID200		Inbound from Northern Origins: Routes = US95, US195, US395		Inbound from Southern Origins: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Stevens County, WA	2007	Tonnage	315,894		1,342,380		47,390		57,572		33,404		1,796,639	41.2%
	2012	Tonnage	290,494		1,185,367		43,321		60,348		32,918		1,612,449	40.8%
		% vs 2007	(8.0%)		(11.7%)		(8.6%)		4.8%		(1.5%)		(10.3%)	
Bonner County, ID	2007	Tonnage	786,041	70,960	81,130		201,858		22,087		543,801		1,705,877	39.2%
	2012	Tonnage	637,411	48,848	64,312		189,600		21,474		564,021		1,525,667	38.6%
		% vs 2007	(18.9%)	(31.2%)	(20.7%)		(6.1%)		(2.8%)		3.7%		(10.6%)	
Boundary County, ID	2007	Tonnage	159,353		9,320	62,080	33,489	17,120	5,444	7,960	78,468	23,280	396,514	9.1%
	2012	Tonnage	131,521		7,387	53,198	33,782	17,874	5,030	5,573	88,087	21,243	363,695	9.2%
		% vs 2007	(17.5%)		(20.7%)	(14.3%)	0.9%	4.4%	(7.6%)	(30.0%)	12.3%	(8.8%)	(8.3%)	
Pend Oreille County, WA	2007	Tonnage	43,866		145,126		17,456	5,320	37,829	2,560	9,857		262,014	6.0%
	2012	Tonnage	40,458		127,110		19,393	4,793	37,756	2,452	9,158		241,120	6.1%
		% vs 2007	(7.8%)		(12.4%)		11.1%	(9.9%)	(0.2%)	(4.2%)	(7.1%)		(8.0%)	
Ferry County, WA	2007	Tonnage	23,730		119,879	1,080	5,109		41,145		3,935		194,878	4.5%
	2012	Tonnage	24,936		129,528	855	5,479		40,437		4,517		205,752	5.2%
		% vs 2007	5.1%		8.0%	(20.9%)	7.2%		(1.7%)		14.8%		5.6%	
County Summary	2007	Tonnage	1,328,884	70,960	1,697,835	63,160	305,303	22,440	164,077	10,520	669,464	23,280	4,355,923	100.0%
	2012	Tonnage	1,124,820	48,848	1,513,703	54,053	291,577	22,667	165,045	8,025	698,701	21,243	3,948,683	100.0%
		% vs 2007	(15.4%)	(31.2%)	(10.8%)	(14.4%)	(4.5%)	1.0%	0.6%	(23.7%)	4.4%	(8.8%)	(9.3%)	

2007 Truck Freight	2007	Tons %	30.5%		65.1%								
2007 Rail Freight	2007	Tons %		1.6%	2.7%								100.0%
2012 Truck Freight	2012	Tons %	28.5%		67.6%								
2012 Rail Freight	2012	Tons %		1.2%	2.7%								100.0%
2007 Truck + Rail	2007	Tons %	32.1%		40.4%		7.5%		4.0%		15.9%		100.0%
2012Truck Freight	2012	Tons %	29.7%		39.7%		8.0%		4.4%		18.2%		100.0%

Exhibit B 3: 2007 and 2012 Northern Counties Outbound Tonnage

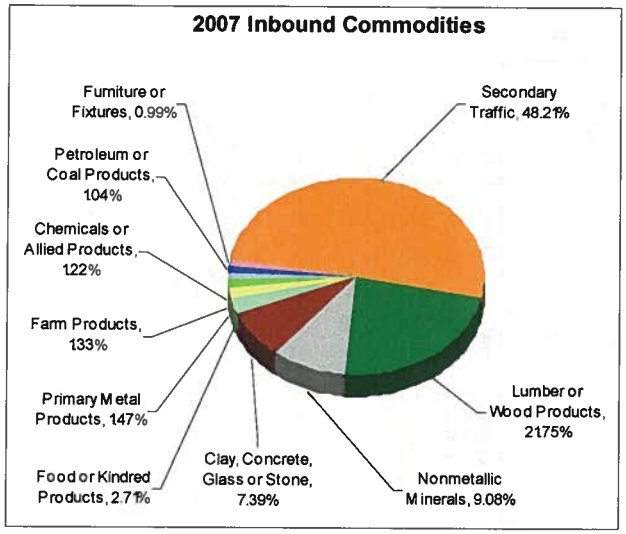
Northern Counties Outbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	4,341,656	3,123,204	(1,218,452)	(28.1%)
Rail Only	Tonnage & Growth Rate	81,440	57,587	(23,853)	(29.3%)
Truck + Rail	Tonnage & Growth Rate	4,423,096	3,180,791	(1,242,305)	(28.1%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	5,612,369	4,656,541	(955,828)	(17.0%)
Rail Only	Tonnage & Growth Rate	1,866,586	1,695,568	(171,018)	(9.2%)
Truck + Rail	Tonnage & Growth Rate	7,478,955	6,352,109	(1,126,846)	(15.1%)
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	9,954,025	7,779,745	(2,174,280)	(21.8%)
Rail Only	Tonnage & Growth Rate	1,948,026	1,753,155	(194,871)	(10.0%)
Truck + Rail	Tonnage & Growth Rate	11,902,051	9,532,900	(2,369,151)	(19.9%)

Exhibit B 4: 2007 and 2012 Northern Counties Outbound Distribution

Northern Counties Outbound Tonnage			Local Freight: Circulates within IPH Counties		Outbound to Western Destinations: Routes = I-90, US2, US12, US20		Outbound to Eastern Destinations: Routes = I-90, US2, US12, ID200		Outbound to Northern Destinations: Routes = US95, US195, US395		Outbound to Southern Destinations: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Bonner County, ID	2007	Tonnage	3,125,780	66,880	148,983	11,400	562,625	196,360	10,011		819,734	112,960	5,054,734	42.5%
	2012	Tonnage	2,265,620	46,840	124,376	7,444	522,590	192,908	9,503		446,898	99,302	3,715,481	39.0%
		% vs 2007	(27.5%)	(30.0%)	(16.5%)	(34.7%)	(7.1%)	(1.8%)	(5.1%)		(45.5%)	(12.1%)	(26.5%)	
Stevens County, WA	2007	Tonnage	698,031		1,581,893	299,728	167,845	213,120	170,156	75,116	206,870	16,000	3,428,758	28.8%
	2012	Tonnage	456,499		1,077,669	262,743	146,548	186,265	175,105	81,027	188,019	12,848	2,586,722	27.1%
		% vs 2007	(34.6%)		(31.9%)	(12.3%)	(12.7%)	(12.6%)	2.9%	7.9%	(9.1%)	(19.7%)	(24.6%)	
Boundary County, ID	2007	Tonnage	218,713	14,560	51,739	199,782	266,729	231,560	5,559	63,120	702,336	377,680	2,131,778	17.9%
	2012	Tonnage	164,924	10,747	51,803	179,056	263,639	215,271	5,434	69,425	502,655	328,512	1,791,465	18.8%
		% vs 2007	(24.6%)	(26.2%)	0.1%	(10.4%)	(1.2%)	(7.0%)	(2.3%)	10.0%	(28.4%)	(13.0%)	(16.0%)	
Pend Oreille County, WA	2007	Tonnage	266,919		421,193		21,810	27,400	11,221		33,126	42,360	824,030	6.9%
	2012	Tonnage	184,120		391,810		20,091	25,045	10,486		32,455	35,724	699,730	7.3%
		% vs 2007	(31.0%)		(7.0%)		(7.9%)	(8.6%)	(6.6%)		(2.0%)	(15.7%)	(15.1%)	
Ferry County, WA	2007	Tonnage	32,213		363,535		23,849		6,850		36,304		462,750	3.9%
	2012	Tonnage	52,041		582,841		48,496		6,222		49,901		739,501	7.8%
		% vs 2007	61.6%		60.3%		103.3%		(9.2%)		37.5%		59.8%	
County Summary	2007	Tonnage	4,341,656	81,440	2,567,343	510,910	1,042,857	668,440	203,798	138,236	1,798,370	549,000	11,902,051	100.0%
	2012	Tonnage	3,123,204	57,587	2,228,498	449,243	1,001,364	619,488	206,750	150,452	1,219,929	476,386	9,532,900	100.0%
		% vs 2007	(28.1%)	(29.3%)	(13.2%)	(12.1%)	(4.0%)	(7.3%)	1.4%	8.8%	(32.2%)	(13.2%)	(19.9%)	

2007 Truck Freight	2007	Tons %	36.5%		47.2%								
2007 Rail Freight	2007	Tons %		0.7%	15.7%								100.0%
2012 Truck Freight	2012	Tons %	32.8%		48.8%								
2012 Rail Freight	2012	Tons %		0.6%	17.8%								100.0%
2007 Truck + Rail	2007	Tons %	37.2%		25.9%		14.4%		2.9%		19.7%		100.0%
2012Truck Freight	2012	Tons %	33.4%		28.1%		17.0%		3.7%		17.8%		100.0%

Exhibit B 5: 2007 and 2012 Northern Counties Top Ten Inbound Commodities



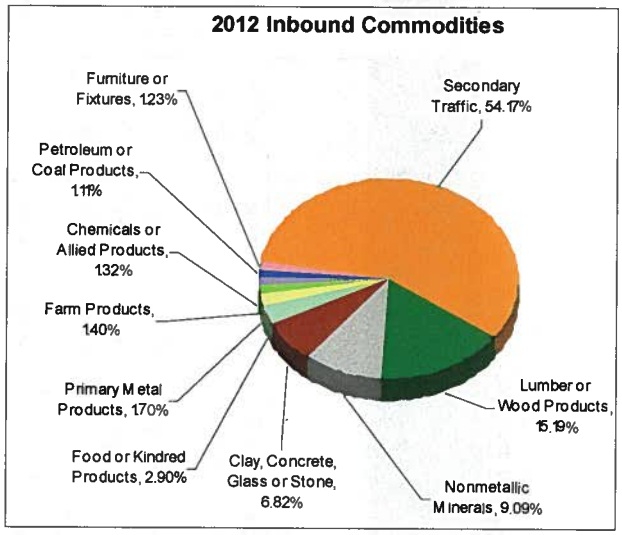
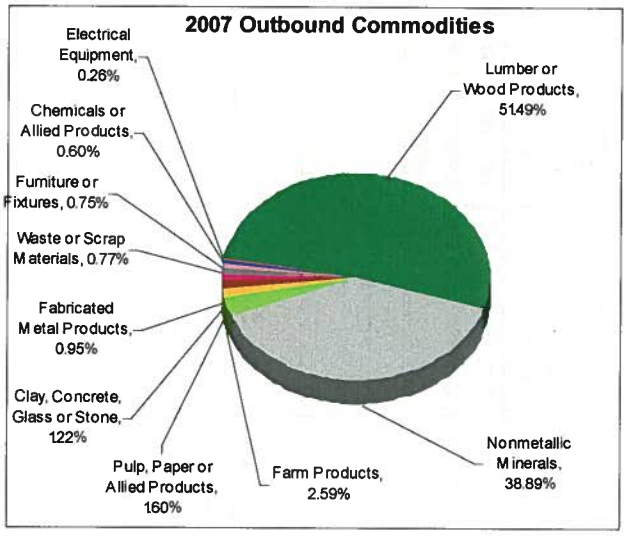


Exhibit B 6: 2007 and 2012 Northern Counties Top Ten Outbound Commodities



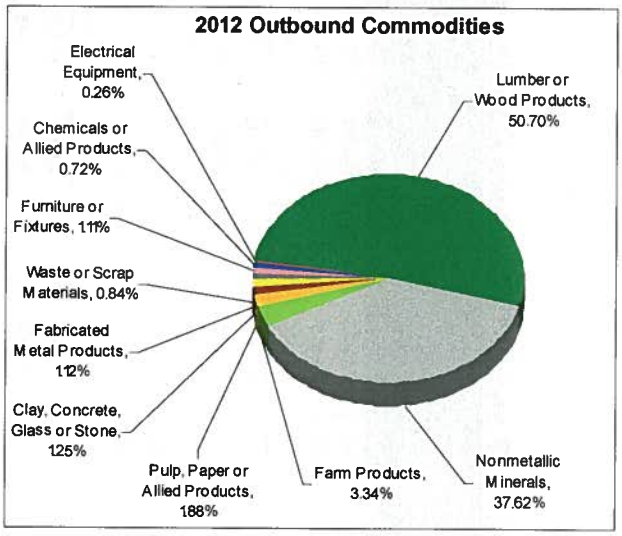


Exhibit B 7: 2007 and 2012 Northern Counties Commodities Forecast Changes

Northern Counties Inbound Top 20 Commodities	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Secondary Freight	48.21%	2,099,804	1.87%	2,139,119	54.17%
Lumber or Wood Products	21.75%	947,405	(36.69%)	599,846	15.19%
Nonmetallic Minerals	9.08%	395,413	(9.20%)	359,045	9.09%
Clay, Concrete, Glass or Stone	7.39%	321,711	(16.29%)	269,288	6.82%
Food or Kindred Products	2.71%	118,222	(3.19%)	114,456	2.90%
Primary Metal Products	1.47%	64,021	5.06%	67,262	1.70%
Farm Products	1.33%	57,765	(4.55%)	55,136	1.40%
Chemicals or Allied Products	1.22%	52,984	(1.68%)	52,094	1.32%
Petroleum or Coal Products	1.04%	45,151	(2.63%)	43,965	1.11%
Furniture or Fixtures	0.99%	42,978	12.61%	48,398	1.23%
Pulp, Paper or Allied Products	0.98%	42,641	(6.89%)	39,704	1.01%
Rail Intermodal Drayage from Ramp	0.63%	27,403	(14.94%)	23,310	0.59%
Electrical Equipment	0.59%	25,847	(21.10%)	20,393	0.52%
Fabricated Metal Products	0.49%	21,314	(6.97%)	19,829	0.50%
Transportation Equipment	0.47%	20,557	2.63%	21,096	0.53%
Waste or Scrap Materials	0.44%	19,017	3.97%	19,772	0.50%
Coal	0.39%	17,201	(1.67%)	16,913	0.43%
Rubber or Misc Plastics	0.24%	10,290	(3.53%)	9,926	0.25%
Machinery	0.20%	8,850	15.85%	10,253	0.26%
Misc Manufacturing Products	0.17%	7,288	22.65%	8,938	0.23%

Northern Counties Outbound Top 20 Commodities	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Lumber or Wood Products	51.49%	6,128,070	(21.13%)	4,832,978	50.70%
Nonmetallic Minerals	38.89%	4,628,855	(22.53%)	3,585,947	37.62%
Farm Products	2.59%	308,288	3.26%	318,329	3.34%
Pulp, Paper or Allied Products	1.60%	189,859	(5.76%)	178,926	1.88%
Clay, Concrete, Glass or Stone	1.22%	145,315	(17.89%)	119,316	1.25%
Fabricated Metal Products	0.95%	113,431	(5.79%)	106,859	1.12%
Waste or Scrap Materials	0.77%	91,154	(12.33%)	79,911	0.84%
Furniture or Fixtures	0.75%	89,048	18.98%	105,950	1.11%
Chemicals or Allied Products	0.60%	71,049	(3.37%)	68,656	0.72%
Electrical Equipment	0.26%	30,788	(18.19%)	25,189	0.26%
Food or Kindred Products	0.19%	22,932	6.44%	24,409	0.26%
Secondary Freight	0.15%	17,861	26.70%	22,630	0.24%
Primary Metal Products	0.15%	17,561	(30.11%)	12,273	0.13%
Transportation Equipment	0.12%	14,682	17.72%	17,284	0.18%
Rail Intermodal Drayage to Ramp	0.09%	11,184	2.01%	11,409	0.12%
Rubber or Misc Plastics	0.07%	7,946	(4.96%)	7,552	0.08%
Apparel or Related Products	0.03%	3,165	52.36%	4,822	0.05%
Fresh Fish or Marine Products	0.03%	2,986	(1.28%)	2,947	0.03%
Metallic Ores	0.02%	2,902	(36.78%)	1,835	0.02%
Printed Matter	0.02%	2,188	34.74%	2,949	0.03%

Exhibit B 8: 2007 and 2012 Central Counties Inbound Tonnage

Central Counties Inbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	8,868,718	6,875,613	(1,993,105)	(22.5%)
Rail Only	Tonnage & Growth Rate	22,044	17,950	(4,094)	(18.6%)
Truck + Rail	Tonnage & Growth Rate	8,890,762	6,893,562	(1,997,200)	(22.5%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	12,897,378	11,846,378	(1,051,000)	(8.1%)
Rail Only	Tonnage & Growth Rate	4,811,408	4,682,202	(129,206)	(2.7%)
Truck + Rail	Tonnage & Growth Rate	17,708,786	16,528,580	(1,180,206)	(6.7%)
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	21,766,096	18,721,991	(3,044,105)	(14.0%)
Rail Only	Tonnage & Growth Rate	4,833,452	4,700,152	(133,300)	(2.8%)
Truck + Rail	Tonnage & Growth Rate	26,599,548	23,422,143	(3,177,405)	(11.9%)

Exhibit B 9: 2007 and 2012 Central Counties Inbound Distribution

Central Counties Inbound Tonnage			Local Freight Circulates within IPH Counties		Inbound from Western Origins: Routes = I-90, US2, US12, US20		Inbound from Eastern Origins: Routes = I-90, US2, US12, ID200		Inbound from Northern Origins: Routes = US95, US195, US395		Inbound from Southern Origins: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Spokane County, WA	2007	Tonnage	6,703,832	18,084	8,403,410	401,916	962,855	3,498,236	148,804	498,264	525,569	60,240	21,221,210	79.8%
	2012	Tonnage	4,922,242	15,074	7,281,890	337,962	920,291	3,480,165	156,478	455,494	512,621	57,362	18,139,579	77.4%
		% vs 2007	(26.6%)	(16.6%)	(13.3%)	(15.9%)	(4.4%)	(0.5%)	5.2%	(8.6%)	(2.5%)	(4.8%)	(14.5%)	
Kootenai County, ID	2007	Tonnage	1,234,365	3,960	525,056	3,280	379,073	58,308	44,826	36,600	604,640	18,840	2,908,948	10.9%
	2012	Tonnage	949,743	2,875	465,924	1,954	367,435	68,614	48,906	37,144	601,887	17,024	2,561,506	10.9%
		% vs 2007	(23.1%)	(27.4%)	(11.3%)	(40.4%)	(3.1%)	17.7%	9.1%	1.5%	(0.5%)	(9.6%)	(11.9%)	
Lincoln County, WA	2007	Tonnage	469,949		392,457		68,301	3,920	33,350	3,160	78,913		1,050,050	3.9%
	2012	Tonnage	552,525		534,780		94,669	5,274	34,100	3,214	84,111		1,308,673	5.6%
		% vs 2007	17.6%		36.3%		38.6%	34.5%	2.2%	1.7%	6.6%		24.6%	
Adams County, WA	2007	Tonnage	244,572		503,432	4,000	16,908	145,604	34,905	73,400	22,646	5,640	1,051,107	4.0%
	2012	Tonnage	229,798		500,149	3,898	21,034	129,788	35,512	78,451	22,858	5,859	1,027,345	4.4%
		% vs 2007	(6.0%)		(0.7%)	(2.6%)	24.4%	(10.9%)	1.7%	6.9%	0.9%	3.9%	(2.3%)	
Shoshone County, ID	2007	Tonnage	216,000		33,097		62,467		4,843		51,826		368,233	1.4%
	2012	Tonnage	221,306		33,726		73,605		4,454		51,948		385,040	1.6%
		% vs 2007	2.5%		1.9%		17.8%		(8.0%)		0.2%		4.6%	
County Summary	2007	Tonnage	8,868,718	22,044	9,857,453	409,196	1,489,604	3,706,068	266,728	611,424	1,283,593	84,720	26,599,548	100.0%
	2012	Tonnage	6,875,613	17,950	8,816,470	343,814	1,477,034	3,683,841	279,449	574,303	1,273,426	80,244	23,422,143	100.0%
		% vs 2007	(22.5%)	(18.6%)	(10.6%)	(16.0%)	(0.8%)	(0.6%)	4.8%	(6.1%)	(0.8%)	(5.3%)	(11.9%)	

2007 Truck Freight	2007	Tons %	33.3%		48.5%			
2007 Rail Freight	2007	Tons %		0.1%	18.1%			100.0%
2012 Truck Freight	2012	Tons %	29.4%		50.6%			
2012 Rail Freight	2012	Tons %		0.1%	20.0%			100.0%
2007 Truck + Rail	2007	Tons %	33.4%	38.6%	19.5%	3.3%	5.1%	100.0%
2012Truck Freight	2012	Tons %	29.4%	39.1%	22.0%	3.6%	5.8%	100.0%

Exhibit B 10: 2007 and 2012 Central Counties Outbound Tonnage

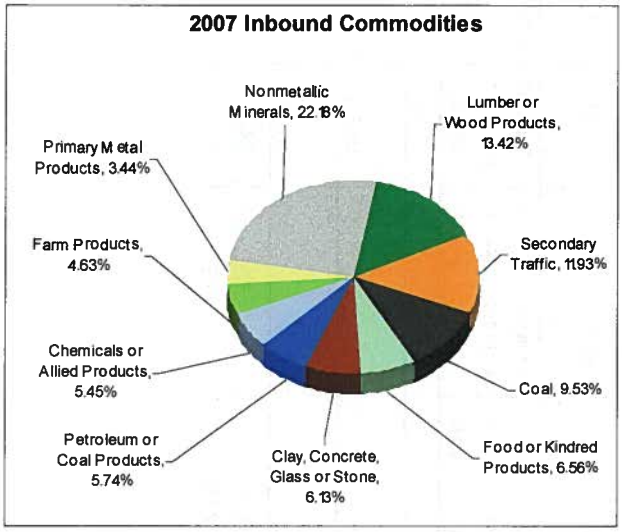
Central Counties Outbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	4,372,966	3,564,684	(808,282)	(18.5%)
Rail Only	Tonnage & Growth Rate	6,256	5,156	(1,100)	(17.6%)
Truck + Rail	Tonnage & Growth Rate	4,379,222	3,569,839	(809,383)	(18.5%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	17,931,927	16,324,350	(1,607,577)	(9.0%)
Rail Only	Tonnage & Growth Rate	6,418,537	5,829,796	(588,741)	(9.2%)
Truck + Rail	Tonnage & Growth Rate	24,350,464	22,154,146	(2,196,318)	(9.0%)
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	22,304,893	19,889,034	(2,415,860)	(10.8%)
Rail Only	Tonnage & Growth Rate	6,424,793	5,834,952	(589,841)	(9.2%)
Truck + Rail	Tonnage & Growth Rate	28,729,686	25,723,986	(3,005,701)	(10.5%)

Exhibit B 11: 2007 and 2012 Central Counties Outbound Distribution

Central Counties Outbound Tonnage			Local Freight: Circulates within IPH Counties		Outbound to Western Destinations. Routes = I-90, US2, US12, US20		Outbound to Eastern Destinations. Routes = I-90, US2, US12, ID200		Outbound to Northern Destinations. Routes = US95, US195, US395		Outbound to Southern Destinations. Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Spokane County, WA	2007	Tonnage	1,672,550	4,496	8,843,907	3,300,477	1,004,653	374,932	287,471	5,600	943,720	80,056	16,517,862	57.5%
	2012	Tonnage	1,471,817	3,512	7,878,333	3,352,069	902,423	341,727	310,486	6,067	873,410	69,665	15,209,508	59.1%
		% vs 2007	(12.0%)	(21.9%)	(10.9%)	1.6%	(10.2%)	(8.9%)	8.0%	8.3%	(7.5%)	(13.0%)	(7.9%)	
Kootenai County, ID	2007	Tonnage	2,291,415		664,034	6,600	863,336	242,400	59,181		1,967,748	82,800	6,177,513	21.5%
	2012	Tonnage	1,754,852		629,817	5,807	842,700	216,777	64,283		1,862,338	67,255	5,443,830	21.2%
		% vs 2007	(23.4%)		(5.2%)	(12.0%)	(2.4%)	(10.6%)	8.6%		(5.4%)	(18.8%)	(11.9%)	
Adams County, WA	2007	Tonnage	175,293	880	297,272	1,011,116	57,175	147,760	87,522		1,044,816	3,960	2,825,795	9.8%
	2012	Tonnage	144,294	822	255,457	741,246	50,312	140,110	88,825		970,480	3,859	2,395,405	9.3%
		% vs 2007	(17.7%)	(6.6%)	(14.1%)	(26.7%)	(12.0%)	(5.2%)	1.5%		(7.1%)	(2.6%)	(15.2%)	
Lincoln County, WA	2007	Tonnage	175,293	880	297,272	1,011,116	57,175	147,760	87,522		1,044,816	3,960	2,825,795	9.8%
	2012	Tonnage	144,294	822	255,457	741,246	50,312	140,110	88,825		970,480	3,859	2,395,405	9.3%
		% vs 2007	(17.7%)	(6.6%)	(14.1%)	(26.7%)	(12.0%)	(5.2%)	1.5%		(7.1%)	(2.6%)	(15.2%)	
Shoshone County, ID	2007	Tonnage	58,416		17,176		189,996		8,303		108,830		382,721	1.3%
	2012	Tonnage	49,425		14,496		148,918		8,684		58,314		279,836	1.1%
		% vs 2007	(15.4%)		(15.6%)		(21.6%)		4.6%		(46.4%)		(26.9%)	
County Summary	2007	Tonnage	4,372,966	6,256	10,119,662	5,329,309	2,172,336	912,852	529,999	5,600	5,109,930	170,776	28,729,686	100.0%
	2012	Tonnage	3,564,684	5,156	9,033,561	4,840,368	1,994,664	838,725	561,103	6,067	4,735,022	144,637	25,723,986	100.0%
		% vs 2007	(18.5%)	(17.6%)	(10.7%)	(9.2%)	(8.2%)	(8.1%)	5.9%	8.3%	(7.3%)	(15.3%)	(10.5%)	

2007 Truck Freight	2007	Tons %	15.2%		62.4%								
2007 Rail Freight	2007	Tons %		0.0%	22.3%								100.0%
2012 Truck Freight	2012	Tons %	13.9%		63.5%								
2012 Rail Freight	2012	Tons %		0.0%	22.7%								100.0%
2007 Truck + Rail	2007	Tons %	15.2%		53.8%		10.7%		1.9%		18.4%		100.0%
2012Truck Freight	2012	Tons %	13.9%		53.9%		11.0%		2.2%		19.0%		100.0%

Exhibit B 12: 2007 and 2012 Central Counties Top Ten Inbound Commodities



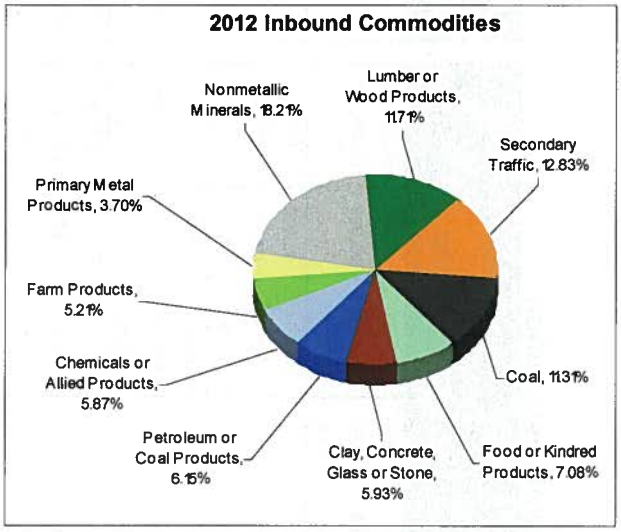
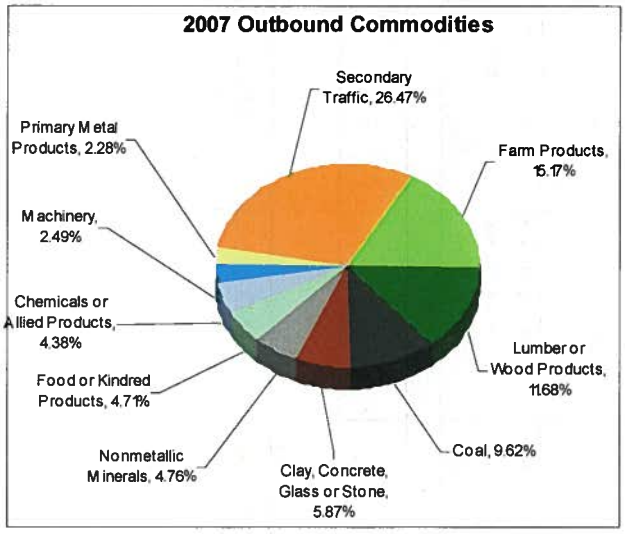


Exhibit B 13: 2007 and 2012 Central Counties Top Ten Outbound Commodities



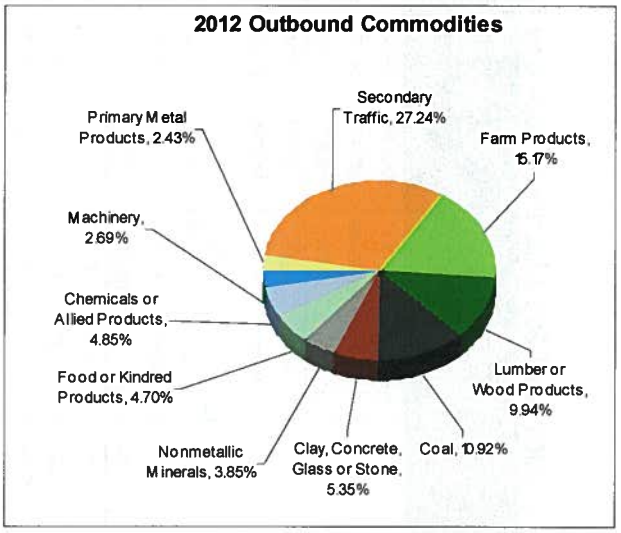


Exhibit B 14: 2007 and 2012 Central Counties Commodities Forecast Changes

Central Counties Inbound Top 20 Commodities	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Nonmetallic Minerals	22.18%	5,898,736	(27.68%)	4,266,149	18.21%
Lumber or Wood Products	13.42%	3,570,781	(23.18%)	2,743,025	11.71%
Secondary Freight	11.93%	3,173,717	(5.34%)	3,004,344	12.83%
Coal	9.53%	2,534,905	4.53%	2,649,806	11.31%
Food or Kindred Products	6.56%	1,744,637	(4.99%)	1,657,600	7.08%
Clay, Concrete, Glass or Stone	6.13%	1,630,992	(14.88%)	1,388,339	5.93%
Petroleum or Coal Products	5.74%	1,526,093	(5.57%)	1,441,142	6.15%
Chemicals or Allied Products	5.45%	1,450,293	(5.23%)	1,374,437	5.87%
Farm Products	4.63%	1,231,331	(0.97%)	1,219,366	5.21%
Primary Metal Products	3.44%	915,278	(5.27%)	867,031	3.70%
Transportation Equipment	1.53%	407,078	18.25%	481,362	2.06%
Fabricated Metal Products	1.31%	349,519	(11.17%)	310,494	1.33%
Pulp, Paper or Allied Products	1.17%	311,778	(9.34%)	282,650	1.21%
Rail Intermodal Drayage from Ramp	1.02%	272,237	(14.93%)	231,583	0.99%
Electrical Equipment	0.98%	259,496	(4.76%)	247,152	1.06%
Rail Intermodal Drayage to Ramp	0.79%	211,332	2.01%	215,584	0.92%
Machinery	0.73%	192,885	(3.57%)	185,998	0.79%
Rubber or Misc Plastics	0.55%	145,185	(4.07%)	139,273	0.59%
Misc Mixed Shipments	0.51%	135,760	(15.92%)	114,147	0.49%
Waste or Scrap Materials	0.40%	105,101	15.16%	121,034	0.52%

Central Counties Outbound Top 20 Commodities	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Secondary Freight	26.47%	7,109,401	(6.87%)	6,621,252	27.24%
Farm Products	15.17%	4,075,401	(9.53%)	3,687,198	15.17%
Lumber or Wood Products	11.68%	3,136,953	(23.00%)	2,415,372	9.94%
Coal	9.62%	2,583,149	2.72%	2,653,434	10.92%
Clay, Concrete, Glass or Stone	5.87%	1,575,272	(17.37%)	1,301,693	5.35%
Nonmetallic Minerals	4.76%	1,277,532	(26.69%)	936,605	3.85%
Food or Kindred Products	4.71%	1,265,232	(9.75%)	1,141,878	4.70%
Chemicals or Allied Products	4.38%	1,175,388	0.22%	1,178,017	4.85%
Machinery	2.49%	669,599	(2.17%)	655,066	2.69%
Primary Metal Products	2.28%	611,628	(3.37%)	590,989	2.43%
Fabricated Metal Products	2.11%	567,492	(8.64%)	518,474	2.13%
Transportation Equipment	1.64%	439,877	14.60%	504,105	2.07%
Electrical Equipment	1.34%	358,834	(34.96%)	233,399	0.96%
Petroleum or Coal Products	1.29%	346,946	(9.78%)	313,018	1.29%
Pulp, Paper or Allied Products	1.18%	316,925	(11.11%)	281,716	1.16%
Rail Intermodal Drayage from Ramp	1.18%	316,179	(14.94%)	268,945	1.11%
Waste or Scrap Materials	1.16%	312,885	1.49%	317,556	1.31%
Furniture or Fixtures	0.73%	196,923	0.70%	198,293	0.82%
Rail Intermodal Drayage to Ramp	0.38%	101,407	1.99%	103,421	0.43%
Rubber or Misc Plastics	0.37%	99,631	(1.15%)	98,481	0.41%

Exhibit B 15: 2007 and 2012 Southern Counties Inbound Tonnage

Southern Counties Inbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	3,532,327	4,846,167	1,313,840	37.2%
Rail Only	Tonnage & Growth Rate	5,016	5,815	799	15.9%
Truck + Rail	Tonnage & Growth Rate	3,537,343	4,851,982	1,314,639	37.2%
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	2,934,598	4,419,367	1,484,769	50.6%
Rail Only	Tonnage & Growth Rate	432,208	545,920	113,712	26.3%
Truck + Rail	Tonnage & Growth Rate	3,366,806	4,965,287	1,598,481	47.5%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	6,466,925	9,265,534	2,798,609	43.3%
Rail Only	Tonnage & Growth Rate	437,224	551,735	114,511	26.2%
Truck + Rail	Tonnage & Growth Rate	6,904,149	9,817,269	2,913,120	42.2%

Exhibit B 16: 2007 and 2012 Southern Counties Inbound Distribution

Southern Counties Inbound Tonnage			Local Freight Circulates within IPH Counties		Inbound from Western Origins. Routes = I-90, US2, US12, US20		Inbound from Eastern Origins. Routes = I-90, US2, US12, ID200		Inbound from Northern Origins. Routes = US95, US195, US395		Inbound from Southern Origins. Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Nez Perce County, ID	2007	Tonnage	1,118,226		121,334	84,640	276,841	88,328	14,250	85,320	438,423	12,440	2,239,802	32.4%
	2012	Tonnage	1,341,228		126,875	102,465	355,407	86,638	20,644	103,311	659,794	14,268	2,810,630	28.6%
		% vs 2007	19.9%		4.6%	21.1%	28.4%	(1.9%)	44.9%	21.1%	50.5%	14.7%	25.5%	
Whitman County, WA	2007	Tonnage	675,425	3,120	571,510	7,960	26,333	22,600	52,578	23,120	25,807		1,408,454	20.4%
	2012	Tonnage	888,788	3,608	849,174	6,816	49,576	26,248	78,399	37,199	58,615		1,998,423	20.4%
		% vs 2007	31.6%	15.6%	48.6%	(14.4%)	88.3%	16.1%	49.1%	60.9%	127.1%		41.9%	
Asotin County, WA	2007	Tonnage	731,238		153,019		16,143		35,755		9,064		945,219	13.7%
	2012	Tonnage	1,375,928		164,803		22,380		55,400		15,977		1,634,488	16.6%
		% vs 2007	88.2%		7.7%		38.6%		54.9%		76.3%		72.9%	
Latah County, ID	2007	Tonnage	390,477		121,933		142,110		8,152		251,361		914,032	13.2%
	2012	Tonnage	410,892		140,456		248,073		11,209		511,404		1,322,034	13.5%
		% vs 2007	5.2%		15.2%		74.6%		37.5%		103.5%		44.6%	
Clearwater County, ID	2007	Tonnage	244,104		23,160	1,840	62,268		5,606		153,526		490,505	7.1%
	2012	Tonnage	375,078		23,682	2,142	100,030		7,444		260,906		769,282	7.8%
		% vs 2007	53.7%		2.3%	16.4%	60.6%		32.8%		69.9%		56.8%	
Benewah County, ID	2007	Tonnage	302,385	1,896	19,113		59,725		7,081		142,328		532,529	7.7%
	2012	Tonnage	356,296	2,207	13,965		72,246		9,805		205,903		660,423	6.7%
		% vs 2007	17.8%	16.4%	(26.9%)		21.0%		38.5%		44.7%		24.0%	
Garfield County, WA	2007	Tonnage	491		6,805		329	32,240	26,344	52,960	182	15,600	134,952	2.0%
	2012	Tonnage	2,182		20,037		691	45,004	41,962	86,110	571	30,234	226,790	2.3%
		% vs 2007	344.0%		194.4%		110.0%	39.6%	59.3%	62.6%	214.0%	93.8%	68.1%	

Southern Counties Inbound Tonnage (continued)			Local Freight Circulates within IPH Counties		Inbound from Western Origins: Routes = I-90, US2, US12, US20		Inbound from Eastern Origins: Routes = I-90, US2, US12, ID200		Inbound from Northern Origins: Routes = US95, US195, US395		Inbound from Southern Origins: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Lewis County, ID	2007	Tonnage	51,913		3,442		28,989		6,635	5,160	29,781		125,919	1.8%
	2012	Tonnage	67,621		7,082		63,838		8,735	5,485	72,557		225,318	2.3%
		% vs 2007	30.3%		105.8%		120.2%		31.6%	6.3%	143.6%		78.9%	
Columbia County, WA	2007	Tonnage	18,068		52,395		4,884		33,420		3,969		112,737	1.6%
	2012	Tonnage	28,154		68,450		12,501		53,291		7,486		169,882	1.7%
		% vs 2007	55.8%		30.6%		156.0%		59.5%		88.6%		50.7%	
County Summary	2007	Tonnage	3,532,327	5,016	1,072,711	94,440	617,622	143,168	189,822	166,560	1,054,442	28,040	6,904,149	100.0%
	2012	Tonnage	4,846,167	5,815	1,414,524	111,423	924,741	157,890	286,889	232,104	1,793,213	44,502	9,817,269	100.0%
		% vs 2007	37.2%	15.9%	31.9%	18.0%	49.7%	10.3%	51.1%	39.4%	70.1%	58.7%	42.2%	

2007 Truck Freight	2007	Tons %	51.2%		42.5%				100.0%
2007 Rail Freight	2007	Tons %		0.1%	6.3%				
2012 Truck Freight	2012	Tons %	49.4%		45.0%				100.0%
2012 Rail Freight	2012	Tons %		0.1%	5.6%				
2007 Truck + Rail	2007	Tons %	51.2%		16.9%	11.0%	5.2%	15.7%	100.0%
2012 Truck + Rail	2012	Tons %	49.4%		15.5%	11.0%	5.3%	18.7%	100.0%

Exhibit B 17: 2007 and 2012 Southern Counties Outbound Tonnage

Southern Counties Outbound Tonnage		2007	2012	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	4,862,539	6,883,240	2,020,702	41.6%
Rail Only	Tonnage & Growth Rate	3,800	2,654	(1,146)	(30.2%)
Truck + Rail	Tonnage & Growth Rate	4,866,339	6,885,894	2,019,555	41.5%
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	6,532,864	9,311,771	2,778,907	42.5%
Rail Only	Tonnage & Growth Rate	492,712	377,670	(115,042)	(23.3%)
Truck + Rail	Tonnage & Growth Rate	7,025,576	9,689,441	2,663,866	37.9%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	11,395,402	16,195,011	4,799,609	42.1%
Rail Only	Tonnage & Growth Rate	496,512	380,324	(116,188)	(23.4%)
Truck + Rail	Tonnage & Growth Rate	11,891,914	16,575,335	4,683,421	39.4%

Exhibit B 18: 2007 and 2012 Southern Counties Outbound Distribution

Southern Counties Outbound Tonnage			Local Freight: Circulates within IPH Counties		Outbound to Western Destinations: Routes = I-90, US2, US12, US20		Outbound to Eastern Destinations: Routes = I-90, US2, US12, ID200		Outbound to Northern Destinations: Routes = US95, US195, US395		Outbound to Southern Destinations: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Nez Perce County, ID	2007	Tonnage	2,069,127		287,991	34,120	787,416	194,160	20,461		1,961,931	72,000	5,427,206	45.6%
	2012	Tonnage	2,467,904		478,621	39,757	795,556	165,956	29,313		2,249,371	62,489	6,288,968	37.9%
		% vs 2007	19.3%		66.2%	16.5%	1.0%	(14.5%)	43.3%		14.7%	(13.2%)	15.9%	
Whitman County, WA	2007	Tonnage	723,642		255,846	43,552	169,394	1,920	40,103		182,741		1,417,199	11.9%
	2012	Tonnage	796,076		273,568	18,032	169,515	1,363	56,794		225,555		1,540,903	9.3%
		% vs 2007	10.0%		6.9%	(58.6%)	0.1%	(29.0%)	41.6%		23.4%		8.7%	
Asotin County, WA	2007	Tonnage	170,099		520,987		31,299		12,407		44,226		779,018	6.6%
	2012	Tonnage	918,378		2,752,121		86,269		22,817		181,235		3,960,819	23.9%
		% vs 2007	439.9%		428.3%		175.6%		83.9%		309.8%		408.4%	
Latah County, ID	2007	Tonnage	664,561		46,457		100,352	28,760	4,153		173,310	3,600	1,021,193	8.6%
	2012	Tonnage	1,266,296		67,090		272,973	18,665	5,668		129,917	2,257	1,762,867	10.6%
		% vs 2007	90.5%		44.4%		172.0%	(35.1%)	36.5%		(25.0%)	(37.3%)	72.6%	
Clearwater County, ID	2007	Tonnage	391,256		62,451		57,792	3,560	3,066		209,517	2,920	730,562	6.1%
	2012	Tonnage	355,493		52,231		35,109	3,556	3,607		80,080	3,138	533,213	3.2%
		% vs 2007	(9.1%)		(16.4%)		(39.3%)	(0.1%)	17.6%		(61.8%)	7.5%	(27.0%)	
Benewah County, ID	2007	Tonnage	654,388	3,800	69,464		629,686	59,680	6,095		424,874	30,600	1,878,586	15.8%
	2012	Tonnage	851,580	2,654	72,186		578,961	37,811	7,102		331,664	16,589	1,898,547	11.5%
		% vs 2007	30.1%	(30.2%)	3.9%		(8.1%)	(36.6%)	16.5%		(21.9%)	(45.8%)	1.1%	
Garfield County, WA	2007	Tonnage	52,507		8,586		6,380		5,561		9,337		82,371	0.7%
	2012	Tonnage	58,799		8,622		27,790		7,643		8,678		111,532	0.7%
		% vs 2007	12.0%		0.4%		335.6%		37.4%		(7.1%)		35.4%	

Southern Counties Outbound Tonnage (continued)			Local Freight: Circulates within IPH Counties		Outbound to Western Destinations: Routes = I-90, US2, US12, US20		Outbound to Eastern Destinations: Routes = I-90, US2, US12, ID200		Outbound to Northern Destinations: Routes = US95, US195, US395		Outbound to Southern Destinations: Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Lewis County, ID	2007	Tonnage	99,498		17,427		57,981	6,800	1,477		108,330	7,600	299,113	2.5%
	2012	Tonnage	117,441		5,960		26,324	2,733	1,814		58,217	1,227	213,716	1.3%
		% vs 2007	18.0%		(65.8%)		(54.6%)	(59.8%)	22.8%		(46.3%)	(83.9%)	(28.6%)	
Columbia County, WA	2007	Tonnage	37,460		194,335		130	3,440	8,314		12,988		256,667	2.2%
	2012	Tonnage	51,275		184,106		121	4,096	11,429		13,743		264,770	1.6%
		% vs 2007	36.9%		(5.3%)		(6.9%)	19.1%	37.5%		5.8%		3.2%	
County Summary	2007	Tonnage	4,862,539	3,800	1,463,544	77,672	1,840,430	298,320	101,636		3,127,254	116,720	11,891,914	100.0%
	2012	Tonnage	6,883,240	2,654	3,894,506	57,789	1,992,619	234,180	146,187		3,278,459	85,700	16,575,335	100.0%
		% vs 2007	41.6%	(30.2%)	166.1%	(25.6%)	8.3%	(21.5%)	43.8%		4.8%	(26.6%)	39.4%	

2007 Truck Freight	2007	Tons %	40.9%		54.9%								100.0%
2007 Rail Freight	2007	Tons %		0.0%	4.1%								
2012 Truck Freight	2012	Tons %	41.5%		56.2%								100.0%
2012 Rail Freight	2012	Tons %		0.0%	2.3%								
2007 Truck + Rail	2007	Tons %	40.9%		13.0%		18.0%		0.9%		27.3%		100.0%
2012 Truck + Rail	2012	Tons %	41.5%		23.8%		13.4%		0.9%		20.3%		100.0%

Exhibit B 19: 2007 and 2012 Southern Counties Top Ten Inbound Commodities (no water transport)

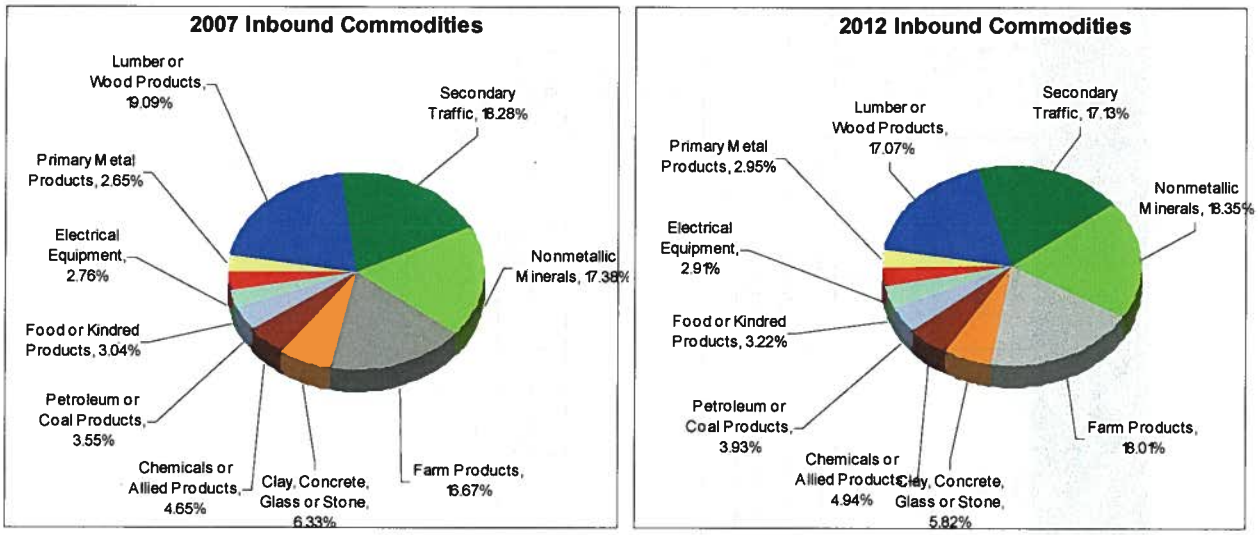


Exhibit B 20: 2007 and 2012 Southern Counties Top Ten Outbound Commodities (no water transport)

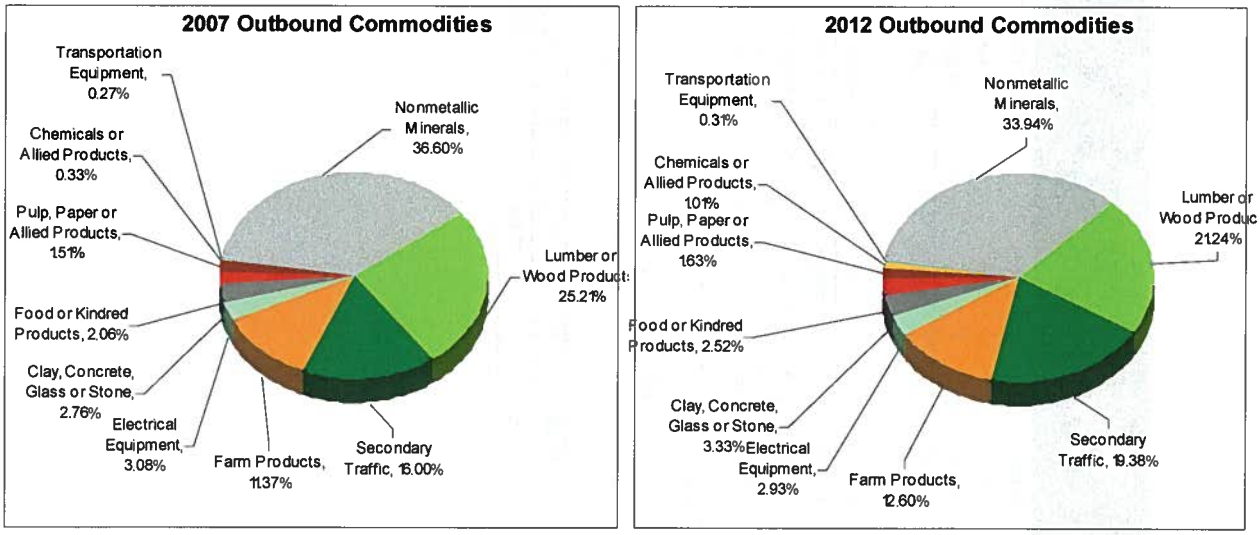
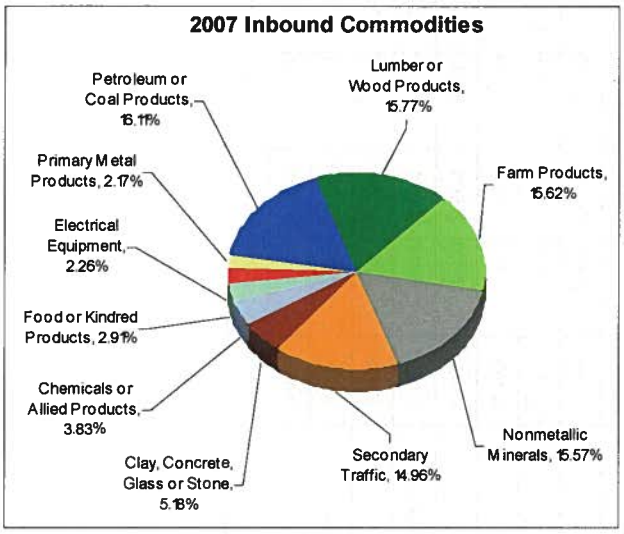


Exhibit B 21: 2007 and 2012 Southern Counties Top Ten Inbound Commodities (with water transport)



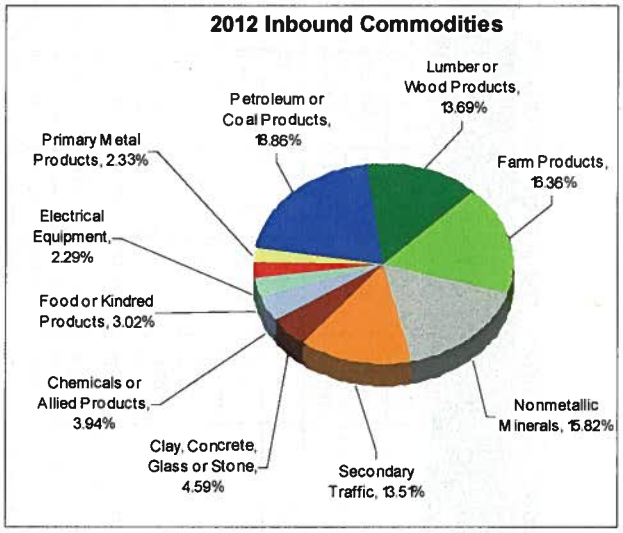
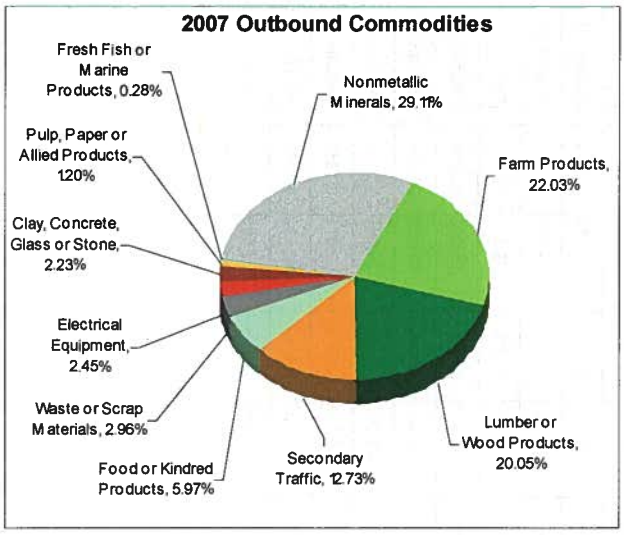


Exhibit B 22: 2007 and 2012 Southern Counties Top Ten Outbound Commodities (with water transport)



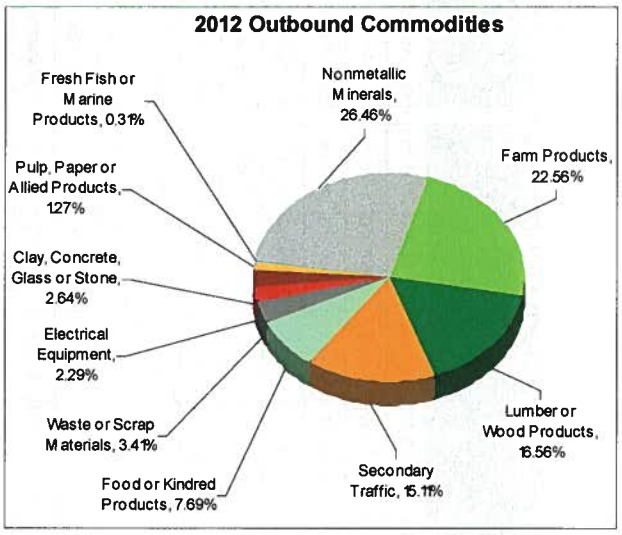


Exhibit B 23: 2007 and 2012 Southern Counties Commodities Forecast Changes (no water transport)

Southern Counties Inbound Top 20 Commodities (no Water Freight)	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Lumber or Wood Products	19.09%	1,318,031	(11.66%)	1,164,369	17.07%
Secondary Freight	18.28%	1,262,325	(7.48%)	1,167,958	17.13%
Nonmetallic Minerals	17.38%	1,199,653	4.31%	1,251,303	18.35%
Farm Products	16.67%	1,151,150	6.68%	1,228,052	18.01%
Clay, Concrete, Glass or Stone	6.33%	437,045	(9.26%)	396,593	5.82%
Chemicals or Allied Products	4.65%	321,136	4.86%	336,745	4.94%
Petroleum or Coal Products	3.55%	245,249	9.38%	268,265	3.93%
Food or Kindred Products	3.04%	209,895	4.46%	219,263	3.22%
Electrical Equipment	2.76%	190,701	3.98%	198,291	2.91%
Primary Metal Products	2.65%	183,082	9.98%	201,356	2.95%
Pulp, Paper or Allied Products	1.92%	132,290	(6.94%)	123,114	1.81%
Transportation Equipment	1.32%	91,270	8.97%	99,458	1.46%
Printed Matter	0.35%	24,243	(3.52%)	23,390	0.34%
Coal	0.35%	24,053	5.45%	25,364	0.37%
Machinery	0.34%	23,573	9.91%	25,908	0.38%
Waste or Scrap Materials	0.34%	23,479	4.94%	24,638	0.36%
Fabricated Metal Products	0.32%	21,808	(3.29%)	21,092	0.31%
Furniture or Fixtures	0.15%	10,153	(10.64%)	9,072	0.13%
Misc Manufacturing Products	0.15%	10,128	7.44%	10,882	0.16%
Rubber or Misc Plastics	0.09%	6,369	1.47%	6,463	0.09%

Southern Counties Outbound Top 20 Commodities (no Water Freight)	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Nonmetallic Minerals	36.60%	4,352,127	(13.14%)	3,780,182	33.94%
Lumber or Wood Products	25.21%	2,997,451	(21.08%)	2,365,573	21.24%
Secondary Freight	16.00%	1,903,133	13.44%	2,158,907	19.38%
Farm Products	11.37%	1,352,620	3.73%	1,403,131	12.60%
Electrical Equipment	3.08%	365,999	(10.81%)	326,453	2.93%
Clay, Concrete, Glass or Stone	2.76%	328,158	12.95%	370,668	3.33%
Food or Kindred Products	2.06%	244,741	14.75%	280,844	2.52%
Pulp, Paper or Allied Products	1.51%	179,129	1.39%	181,620	1.63%
Chemicals or Allied Products	0.33%	38,750	191.57%	112,983	1.01%
Transportation Equipment	0.27%	31,743	9.03%	34,609	0.31%
Misc Manufacturing Products	0.23%	27,544	59.88%	44,037	0.40%
Waste or Scrap Materials	0.18%	20,826	28.57%	26,775	0.24%
Printed Matter	0.12%	14,476	18.51%	17,155	0.15%
Fabricated Metal Products	0.10%	11,313	5.00%	11,879	0.11%
Machinery	0.06%	7,522	6.55%	8,014	0.07%
Rail Intermodal Drayage to Ramp	0.05%	5,407	2.07%	5,519	0.05%
Metallic Ores	0.04%	4,165	(43.73%)	2,344	0.02%
Instrument, Photo Equip, Optical Eq	0.03%	3,273	15.13%	3,769	0.03%
Primary Metal Products	0.01%	1,422	(9.42%)	1,288	0.01%
Tobacco Products	0.01%	676	(22.49%)	524	0.00%

Exhibit B 24: 2007 and 2012 Southern Counties Commodities Forecast Changes (with water transport)

Southern Counties Inbound Top 20 Commodities (+ Water Freight)	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Petroleum or Coal Products	16.11%	1,359,242	19.91%	1,629,913	18.86%
Lumber or Wood Products	15.77%	1,329,859	(11.02%)	1,183,306	13.69%
Farm Products	15.62%	1,317,378	7.34%	1,414,100	16.36%
Nonmetallic Minerals	15.57%	1,313,702	4.06%	1,367,075	15.82%
Secondary Freight	14.96%	1,262,325	(7.48%)	1,167,958	13.51%
Clay, Concrete, Glass or Stone	5.18%	437,045	(9.26%)	396,593	4.59%
Chemicals or Allied Products	3.83%	323,258	5.40%	340,714	3.94%
Food or Kindred Products	2.91%	245,306	6.25%	260,649	3.02%
Electrical Equipment	2.26%	190,701	3.98%	198,291	2.29%
Primary Metal Products	2.17%	183,082	9.98%	201,356	2.33%
Pulp, Paper or Allied Products	1.57%	132,290	(6.94%)	123,114	1.42%
Waste or Scrap Materials	1.20%	101,566	8.19%	109,889	1.27%
Transportation Equipment	1.08%	91,270	8.97%	99,458	1.15%
Printed Matter	0.29%	24,243	(3.52%)	23,390	0.27%
Coal	0.29%	24,053	5.45%	25,364	0.29%
Machinery	0.28%	23,573	9.91%	25,908	0.30%
Fabricated Metal Products	0.26%	21,808	(3.29%)	21,092	0.24%
Furniture or Fixtures	0.12%	10,153	(10.64%)	9,072	0.10%
Misc Manufacturing Products	0.12%	10,128	7.44%	10,882	0.13%
Fresh Fish or Marine Products	0.07%	6,177	13.68%	7,022	0.08%

Southern Counties Outbound Top 20 Commodities (+ Water Freight)	2007 %	2007 Tons	Growth % ►	2012 Tons	2012 %
Nonmetallic Minerals	29.11%	4,352,342	(13.14%)	3,780,461	26.46%
Farm Products	22.03%	3,294,072	(2.18%)	3,222,348	22.56%
Lumber or Wood Products	20.05%	2,997,451	(21.08%)	2,365,573	16.56%
Secondary Freight	12.73%	1,903,133	13.44%	2,158,907	15.11%
Food or Kindred Products	5.97%	892,061	23.19%	1,098,941	7.69%
Waste or Scrap Materials	2.96%	442,744	10.09%	487,400	3.41%
Electrical Equipment	2.45%	365,999	(10.81%)	326,453	2.29%
Clay, Concrete, Glass or Stone	2.23%	333,049	13.10%	376,668	2.64%
Pulp, Paper or Allied Products	1.20%	179,481	1.37%	181,937	1.27%
Fresh Fish or Marine Products	0.28%	42,061	3.95%	43,723	0.31%
Chemicals or Allied Products	0.26%	38,750	191.57%	112,983	0.79%
Transportation Equipment	0.21%	31,743	9.03%	34,609	0.24%
Misc Manufacturing Products	0.18%	27,544	59.88%	44,037	0.31%
Printed Matter	0.10%	14,476	18.51%	17,155	0.12%
Fabricated Metal Products	0.08%	11,313	5.00%	11,879	0.08%
Machinery	0.05%	7,522	6.55%	8,014	0.06%
Rail Intermodal Drayage to Ramp	0.04%	5,407	2.07%	5,519	0.04%
Metallic Ores	0.03%	4,165	(43.73%)	2,344	0.02%
Instrument, Photo Equip, Optical Eq	0.02%	3,273	15.13%	3,769	0.03%
Primary Metal Products	0.01%	1,422	(9.42%)	1,288	0.01%

APPENDIX C: COUNTY CLUSTER FREIGHT FLOWS: 2007 AND 2017 FORECAST

Appendix C contains tables showing freight tonnage flows for 2007 as the base year and a forecast for 2017. Flows shown are formatted the same as the main body of the report. There is a section for each of the county clusters: Northern Counties, Central Counties, and Southern Counties. Flows for each county cluster are subdivided into Inbound and Outbound. Charts depict the top ten commodities for inbound and outbound flows to easily visualize how the commodities will change over the ten year forecast period.

Exhibit C 1: 2007 and 2017 Northern Counties Inbound Tonnage

Northern Counties Inbound Tonnage		2007	2017	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	1,328,884	1,252,608	(76,276)	(5.7%)
Rail Only	Tonnage & Growth Rate	70,960	44,733	(26,227)	(37.0%)
Truck + Rail	Tonnage & Growth Rate	1,399,844	1,297,341	(102,503)	(7.3%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	2,836,679	2,996,916	160,237	5.6%
Rail Only	Tonnage & Growth Rate	119,400	109,702	(9,698)	(8.1%)
Truck + Rail	Tonnage & Growth Rate	2,956,079	3,106,618	150,539	5.1%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	4,165,563	4,249,524	83,961	2.0%
Rail Only	Tonnage & Growth Rate	190,360	154,435	(35,925)	(18.9%)
Truck + Rail	Tonnage & Growth Rate	4,355,923	4,403,959	48,036	1.1%

Exhibit C 2: 2007 and 2017 Northern Counties Inbound Distribution

Northern Counties Inbound Tonnage			Local Freight: Circulates within IPH Counties		Inbound from Western Origins. Routes = I-90, US2, US12, US20		Inbound from Eastern Origins. Routes = I-90, US2, US12, ID200		Inbound from Northern Origins. Routes = US95, US195, US395		Inbound from Southern Origins. Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Stevens County, WA	2007	Tonnage	315,894		1,342,380		47,390		57,572		33,404		1,796,639	41.2%
	2017	Tonnage	330,821		1,323,700		48,012		69,851		38,409		1,810,792	41.1%
		% vs 2007	4.7%		(1.4%)		1.3%		21.3%		15.0%		0.8%	
Bonner County, ID	2007	Tonnage	786,041	70,960	81,130		201,858		22,087		543,801		1,705,877	39.2%
	2017	Tonnage	700,652	44,733	62,972		220,903		24,294		627,329		1,680,882	38.2%
		% vs 2007	(10.9%)	(37.0%)	(22.4%)		9.4%		10.0%		15.4%		(1.5%)	
Boundary County, ID	2007	Tonnage	159,353		9,320	62,080	33,489	17,120	5,444	7,960	78,468	23,280	396,514	9.1%
	2017	Tonnage	145,192		7,514	54,965	37,291	20,465	5,799	6,212	99,947	19,841	397,226	9.0%
		% vs 2007	(8.9%)		(19.4%)	(11.5%)	11.4%	19.5%	6.5%	(22.0%)	27.4%	(14.8%)	0.2%	
Pend Oreille County, WA	2007	Tonnage	43,866		145,126		17,456	5,320	37,829	2,560	9,857		262,014	6.0%
	2017	Tonnage	45,844		140,288		25,021	4,661	43,808	2,586	11,580		273,787	6.2%
		% vs 2007	4.5%		(3.3%)		43.3%	(12.4%)	15.8%	1.0%	17.5%		4.5%	
Ferry County, WA	2007	Tonnage	23,730		119,879	1,080	5,109		41,145		3,935		194,878	4.5%
	2017	Tonnage	30,099		151,120	972	5,792		47,453		5,834		241,271	5.5%
		% vs 2007	26.8%		26.1%	(10.0%)	13.4%		15.3%		48.3%		23.8%	
County Summary	2007	Tonnage	1,328,884	70,960	1,697,835	63,160	305,303	22,440	164,077	10,520	669,464	23,280	4,355,923	100.0%
	2017	Tonnage	1,252,608	44,733	1,685,594	55,937	337,019	25,126	191,205	8,798	783,099	19,841	4,403,959	100.0%
		% vs 2007	(5.7%)	(37.0%)	(0.7%)	(11.4%)	10.4%	12.0%	16.5%	(16.4%)	17.0%	(14.8%)	1.1%	

2007 Truck Freight	2007	Tons %	30.5%		65.1%				
2007 Rail Freight	2007	Tons %		1.6%	2.7%				100.0%
2017 Truck Freight	2017	Tons %	28.4%		68.1%				
2017 Rail Freight	2017	Tons %		1.0%	2.5%				100.0%
2007 Truck + Rail	2007	Tons %	32.1%		40.4%	7.5%	4.0%	15.9%	100.0%
2017Truck Freight	2017	Tons %	29.5%		39.5%	8.2%	4.5%	18.2%	100.0%

Exhibit C 3: 2007 and 2017 Northern Counties Outbound Tonnage

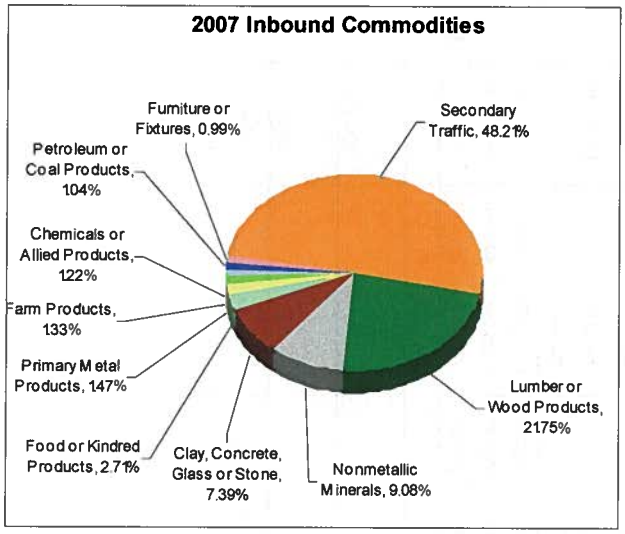
Northern Counties Outbound Tonnage		2007	2017	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	4,341,656	3,555,376	(786,280)	(18.1%)
Rail Only	Tonnage & Growth Rate	81,440	53,752	(27,688)	(34.0%)
Truck + Rail	Tonnage & Growth Rate	4,423,096	3,609,128	(813,968)	(18.4%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	5,612,369	5,153,919	(458,450)	(8.2%)
Rail Only	Tonnage & Growth Rate	1,866,586	1,734,192	(132,394)	(7.1%)
Truck + Rail	Tonnage & Growth Rate	7,478,955	6,888,112	(590,844)	(7.9%)
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	9,954,025	8,709,295	(1,244,730)	(12.5%)
Rail Only	Tonnage & Growth Rate	1,948,026	1,787,945	(160,081)	(8.2%)
Truck + Rail	Tonnage & Growth Rate	11,902,051	10,497,240	(1,404,812)	(11.8%)

Exhibit C 4: 2007 and 2017 Northern Counties Outbound Distribution

Northern Counties Outbound Tonnage			Local Freight: Circulates within IPH Counties		Outbound to Western Destinations. Routes = I-90, US2, US12, US20		Outbound to Eastern Destinations. Routes = I-90, US2, US12, ID200		Outbound to Northern Destinations. Routes = US95, US195, US395		Outbound to Southern Destinations. Routes = US95, US195, US395		Commodity Total	County %
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Bonner County, ID	2007	Tonnage	3,125,780	66,880	148,983	11,400	562,625	196,360	10,011		819,734	112,960	5,054,734	42.5%
	2017	Tonnage	2,670,953	43,535	148,228	6,126	621,036	183,091	10,764		456,505	87,230	4,227,467	40.3%
		% vs 2007	(14.6%)	(34.9%)	(0.5%)	(46.3%)	10.4%	(6.8%)	7.5%		(44.3%)	(22.8%)	(16.4%)	
Stevens County, WA	2007	Tonnage	698,031		1,581,893	299,728	167,845	213,120	170,156	75,116	206,870	16,000	3,428,758	28.8%
	2017	Tonnage	498,297		1,057,444	336,652	144,680	180,471	192,244	86,183	190,020	13,206	2,699,198	25.7%
		% vs 2007	(28.6%)		(33.2%)	12.3%	(13.8%)	(15.3%)	13.0%	14.7%	(8.1%)	(17.5%)	(21.3%)	
Boundary County, ID	2007	Tonnage	218,713	14,560	51,739	199,782	266,729	231,560	5,559	63,120	702,336	377,680	2,131,778	17.9%
	2017	Tonnage	152,312	10,218	57,911	187,388	283,845	206,584	6,047	82,913	483,761	303,586	1,774,564	16.9%
		% vs 2007	(30.4%)	(29.8%)	11.9%	(6.2%)	6.4%	(10.8%)	8.8%	31.4%	(31.1%)	(19.6%)	(16.8%)	
Pend Oreille County, WA	2007	Tonnage	266,919		421,193		21,810	27,400	11,221		33,126	42,360	824,030	6.9%
	2017	Tonnage	153,382		411,483		19,443	24,168	11,665		32,472	36,594	689,208	6.6%
		% vs 2007	(42.5%)		(2.3%)		(10.9%)	(11.8%)	4.0%		(2.0%)	(13.6%)	(16.4%)	
Ferry County, WA	2007	Tonnage	32,213		363,535		23,849		6,850		36,304		462,750	3.9%
	2017	Tonnage	80,432		882,120		74,002		6,803		63,446		1,106,802	10.5%
		% vs 2007	149.7%		142.7%		210.3%		(0.7%)		74.8%		139.2%	
County Summary	2007	Tonnage	4,341,656	81,440	2,567,343	510,910	1,042,857	668,440	203,798	138,236	1,798,370	549,000	11,902,051	100.0%
	2017	Tonnage	3,555,376	53,752	2,557,187	530,165	1,143,006	594,315	227,522	169,097	1,226,205	440,616	10,497,240	100.0%
		% vs 2007	(18.1%)	(34.0%)	(0.4%)	3.8%	9.6%	(11.1%)	11.6%	22.3%	(31.8%)	(19.7%)	(11.8%)	

2007 Truck Freight	2007	Tons %	36.5%		47.2%								
2007 Rail Freight	2007	Tons %		0.7%	15.7%								100.0%
2017 Truck Freight	2017	Tons %	33.9%		49.1%								
2017 Rail Freight	2017	Tons %		0.5%	16.5%								100.0%
2007 Truck + Rail	2007	Tons %	37.2%		25.9%		14.4%		2.9%		19.7%		100.0%
2017Truck Freight	2017	Tons %	34.4%		29.4%		16.6%		3.8%		15.9%		100.0%

Exhibit C 5: 2007 and 2017 Northern Counties Top Ten Inbound Commodities



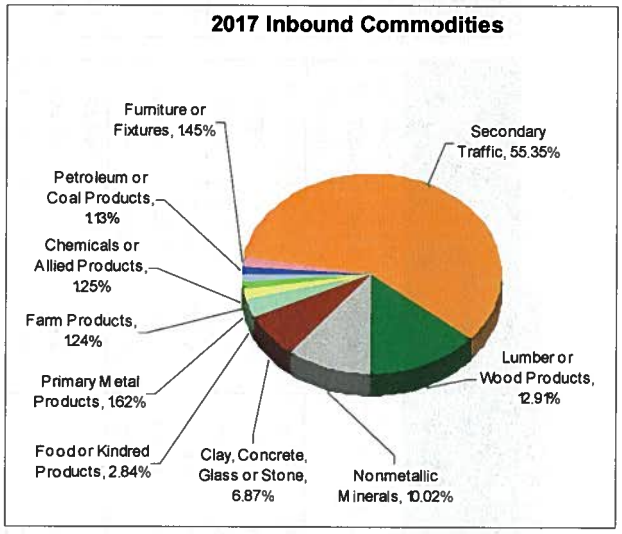


Exhibit C 6: 2007 and 2017 Northern Counties Top Ten Outbound Commodities