

INLAND PACIFIC HUB

Transportation Study



Working Paper 3.2

Regional Freight Profile

April, 2010

Final

WilburSmith
ASSOCIATES

In Association with

Halcrow

and

HNTB

This study was supported by the US Department of Transportation, Office of the Secretary, Grant No. DTOS59-08-G-00105

Table of Contents

Glossary of Terms	5
Freight Profile of The Inland Pacific Hub Study Area	7
Regional Summary	8
Commodity Flows by Direction and Mode	8
Through-freight's Impact On the IPH Study Area	9
IPH Study Area Outbound Freight.....	11
IPH Study Area Inbound Freight	11
IPH Study Area Internal Freight	11
Mode Summary	12
Freight Modes	12
IPH Study Area Summary of Inbound and Outbound Freight Flows	15
Truck Inbound and Outbound Summary	15
Rail Inbound and Outbound Summary	16
County Clusters Summary.....	18
Three County Clusters	18
Freight Flows In The County Clusters	19
Inbound and Outbound Tonnage Summary	21
Rail Carload and Intermodal Summary	25
County Cluster Freight Flows	29
Northern Counties Inbound Freight Flows.....	30
Northern Counties Outbound Freight Flows	33
Commodities That Move Into and Out-of The Northern Counties	36
Central Counties Inbound Freight Flows	41
Central Counties Outbound Freight Flows	44
Commodities That Move Into and Out-of The Central Counties.....	47
Air Freight Movements in the Central Counties.....	53
Southern Counties Inbound Freight Flows	56
Southern Counties Outbound Freight Flows	60
Commodities That Move Into and Out-of The Southern Counties.....	64
Addition of Water Transportation to Southern County Freight Flows	72
Net Changes for the IPH's Inbound and Outbound Commodity Flows.....	82
Import and Export Summary	86
NAFTA Import Flows.....	86
NAFTA Export Flows.....	87
2007 Import and Export Commodity Flows between the IPH and Canada	88
2007 Import and Export Commodity Flows between the IPH Study Area and Mexico	91
Conclusions	94
Appendix A: Data Sources and Processes Used to Create TRANSEARCH™	A-1
Appendix B: County Cluster Freight Flows: 2007 and 2012 Forecast	B-1
Appendix C: County Cluster Freight Flows: 2007 and 2017 Forecast	C-1
Appendix D: TRANSEARCH™ Data Errata	D-1

List of Exhibits

Exhibit 1: Total Freight Flow Tonnage by Mode and Direction	9
Exhibit 2: 2007 Direction of Flows by Tonnage	11
Exhibit 3: 2007 Mode Distribution by Tonnage	12
Exhibit 4: Total Freight Flow Value by Mode and Direction	13
Exhibit 5: 2007 Direction of Flows by Value	14
Exhibit 6: 2007 Mode Distribution by Value	14
Exhibit 7: Summary of IPH Study Area Inbound and Outbound Freight Flows	17
Exhibit 8: County Clusters	19
Exhibit 9: Tonnage Summary for Northern and Central Clusters	23
Exhibit 10: Tonnage Summary for Southern Cluster and All Clusters Combined	24
Exhibit 11: 2007 and 2027 Rail Carload and Intermodal Summary	27
Exhibit 12: 2007 and 2027 Northern Counties Inbound Tonnage	30
Exhibit 13: 2007 and 2027 Northern Counties Inbound Distribution	32
Exhibit 14: 2007 and 2027 Northern Counties Outbound Tonnage	33
Exhibit 15: 2007 and 2027 Northern Counties Outbound Distribution	35
Exhibit 16: 2007 and 2027 Northern Counties Top Ten Inbound Commodities	36
Exhibit 17: 2007 and 2027 Northern Counties Top Ten Outbound Commodities	37
Exhibit 18: 2007 and 2027 Northern Counties Commodities Forecast Changes	38
Exhibit 19: 2007, 2012, 2017 and 2027 Northern Counties Inbound Commodity Growth	39
Exhibit 20: 2007, 2012, 2017 and 2027 Northern Counties Outbound Commodity Growth	40
Exhibit 21: 2007 and 2027 Central Counties Inbound Tonnage	41
Exhibit 22: 2007 and 2027 Central Counties Inbound Distribution	43
Exhibit 23: 2007 and 2027 Central Counties Outbound Tonnage	44
Exhibit 24: 2007 and 2027 Central Counties Outbound Distribution	46
Exhibit 25: 2007 and 2027 Central Counties Top Ten Inbound Commodities	48
Exhibit 26: 2007 and 2027 Central Counties Top Ten Outbound Commodities	48
Exhibit 27: 2007 and 2027 Central Counties Commodities Forecast Changes	50
Exhibit 28: 2007, 2012, 2017 and 2027 Central Counties Inbound Commodity Growth	51
Exhibit 29: 2007, 2012, 2017 and 2027 Central Counties Outbound Commodity Growth	52
Exhibit 30: Airfreight Flows Into the Central Counties	54
Exhibit 31: Airfreight Flows Out Of the Central Counties	55
Exhibit 32: 2007 and 2027 Southern Counties Inbound Tonnage	56
Exhibit 33: 2007 and 2027 Southern Counties Inbound Distribution	58
Exhibit 34: 2007 and 2027 Southern Counties Outbound Tonnage	60
Exhibit 35: 2007 and 2027 Southern Counties Outbound Distribution	62
Exhibit 36: 2007 and 2027 Southern Counties Top Ten Inbound Commodities (no water)	65
Exhibit 37: 2007 and 2027 Southern Counties Top Ten Outbound Commodities (no water)	65
Exhibit 38: 2007 and 2027 Southern Counties Commodities Forecast Changes (no water transport)	67

Exhibit 39: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (no water transport).....	68
Exhibit 40: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (no water transport).....	69
Exhibit 41: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (water only).....	74
Exhibit 42: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (water only).....	75
Exhibit 43: 2007 and 2027 Southern Counties Top Ten Inbound Commodities (with water).....	77
Exhibit 44: 2007 and 2027 Southern Counties Top Ten Outbound Commodities (with water).....	77
Exhibit 45: 2007 and 2027 Southern Counties Commodities Forecast Changes (with water transport).....	79
Exhibit 46: 2007, 2012, 2017 and 2027 Southern Counties Inbound Commodity Growth (with water transport).....	80
Exhibit 47: 2007, 2012, 2017 and 2027 Southern Counties Outbound Commodity Growth (with water transport).....	81
Exhibit 48: 2027 Over 2007 IPH's Inbound Commodity Growth.....	82
Exhibit 49: 2027 Over 2007 IPH Study Area's Outbound Commodity Growth.....	83
Exhibit 50: 2007, 2012, 2017 and 2027 IPH Study Area's Inbound Commodity Growth (all Counties).....	84
Exhibit 51: 2007, 2012, 2017 and 2027 IPH Study Area's Outbound Commodity Growth (all Counties).....	85
Exhibit 52: 2007 NAFTA Import Tonnage.....	86
Exhibit 53: 2007 NAFTA Export Tonnage.....	87
Exhibit 54: 2007 Canadian Import and Export Tonnage.....	89
Exhibit 55: 2007 Mexican Import and Export Tonnage.....	92
Exhibit A 1: Data Elements Used in Developing Production/Consumption Patterns	A-2
Exhibit A 2: Intermodal Freight Movement	A-4
Exhibit B 1: 2007 and 2012 Northern Counties Inbound Tonnage	B-1
Exhibit B 2: 2007 and 2012 Northern Counties Inbound Distribution	B-2
Exhibit B 4: 2007 and 2012 Northern Counties Outbound Distribution.....	B-4
Exhibit B 5: 2007 and 2012 Northern Counties Top Ten Inbound Commodities	B-5
Exhibit B 6: 2007 and 2012 Northern Counties Top Ten Outbound Commodities	B-5
Exhibit B 7: 2007 and 2012 Northern Counties Commodities Forecast Changes	B-6
Exhibit B 8: 2007 and 2012 Central Counties Inbound Tonnage.....	B-7
Exhibit B 9: 2007 and 2012 Central Counties Inbound Distribution.....	B-8
Exhibit B 10: 2007 and 2012 Central Counties Outbound Tonnage.....	B-9
Exhibit B 11: 2007 and 2012 Central Counties Outbound Distribution	B-10
Exhibit B 12: 2007 and 2012 Central Counties Top Ten Inbound Commodities.....	B-11
Exhibit B 13: 2007 and 2012 Central Counties Top Ten Outbound Commodities.....	B-11
Exhibit B 14: 2007 and 2012 Central Counties Commodities Forecast Changes.....	B-12
Exhibit B 15: 2007 and 2012 Southern Counties Inbound Tonnage.....	B-13
Exhibit B 16: 2007 and 2012 Southern Counties Inbound Distribution.....	B-14
Exhibit B 17: 2007 and 2012 Southern Counties Outbound Tonnage.....	B-16

Exhibit B 18: 2007 and 2012 Southern Counties Outbound Distribution	B-17
Exhibit B 19: 2007 and 2012 Southern Counties Top Ten Inbound Commodities (no water transport)	B-19
Exhibit B 20: 2007 and 2012 Southern Counties Top Ten Outbound Commodities (no water transport)	B-19
Exhibit B 21: 2007 and 2012 Southern Counties Top Ten Inbound Commodities (with water transport)	B-20
Exhibit B 22: 2007 and 2012 Southern Counties Top Ten Outbound Commodities (with water transport)	B-20
Exhibit B 23: 2007 and 2012 Southern Counties Commodities Forecast Changes (no water transport)	B-21
Exhibit B 24: 2007 and 2012 Southern Counties Commodities Forecast Changes (with water transport)	B-22
Exhibit C 1: 2007 and 2017 Northern Counties Inbound Tonnage	C-1
Exhibit C 2: 2007 and 2017 Northern Counties Inbound Distribution	C-2
Exhibit C 3: 2007 and 2017 Northern Counties Outbound Tonnage	C-3
Exhibit C 4: 2007 and 2017 Northern Counties Outbound Distribution	C-4
Exhibit C 5: 2007 and 2017 Northern Counties Top Ten Inbound Commodities	C-5
Exhibit C 6: 2007 and 2017 Northern Counties Top Ten Outbound Commodities	C-5
Exhibit C 7: 2007 and 2017 Northern Counties Commodities Forecast Changes	C-6
Exhibit C 8: 2007 and 2017 Central Counties Inbound Tonnage	C-7
Exhibit C 9: 2007 and 2017 Central Counties Inbound Distribution	C-8
Exhibit C 10: 2007 and 2017 Central Counties Outbound Tonnage	C-9
Exhibit C 11: 2007 and 2017 Central Counties Outbound Distribution	C-10
Exhibit C 12: 2007 and 2017 Central Counties Top Ten Inbound Commodities	C-11
Exhibit C 13: 2007 and 2017 Central Counties Top Ten Outbound Commodities	C-11
Exhibit C 14: 2007 and 2017 Central Counties Commodities Forecast Changes	C-12
Exhibit C 15: 2007 and 2017 Southern Counties Inbound Tonnage	C-13
Exhibit C 16: 2007 and 2017 Southern Counties Inbound Distribution	C-14
Exhibit C 17: 2007 and 2017 Southern Counties Outbound Tonnage	C-16
Exhibit C 18: 2007 and 2017 Southern Counties Outbound Distribution	C-17
Exhibit C 19: 2007 and 2017 Southern Counties Top Ten Inbound Commodities (no water transport)	C-19
Exhibit C 20: 2007 and 2017 Southern Counties Top Ten Outbound Commodities (no water transport)	C-19
Exhibit C 21: 2007 and 2017 Southern Counties Top Ten Inbound Commodities (with water transport)	C-20
Exhibit C 22: 2007 and 2017 Southern Counties Top Ten Outbound Commodities (with water transport)	C-20
Exhibit C 23: 2007 and 2017 Southern Counties Commodities Forecast Changes (no water transport)	C-21
Exhibit C 24: 2007 and 2017 Southern Counties Commodities Forecast Changes (with water transport)	C-22

GLOSSARY OF TERMS

Term	Definition
BEA Regions	<p>The U.S. Department of Commerce, Bureau of Economic Analysis (BEA) has defined 179 BEA geographic regions. BEA's economic areas define the relevant regional markets surrounding metropolitan or micropolitan statistical areas. They consist of one or more economic nodes - metropolitan or micropolitan statistical areas that serve as regional centers of economic activity - and the surrounding counties that are economically related to the nodes.</p> <p>To view a map of BEA Regions go to: www.bea.gov/newsreleases/general/2004/pdf/rea1104.pdf</p>
Bulk / Specialized Carrier	<p>Specialized motor carriers transport specific types of goods including construction and military materials, oversize/overweight items, and hazardous materials. Many carriers have specialized commodities in addition to more traditional truckload goods. The specialized carrier market operates according to dedicated business segments and is often terminal specific according to which materials are being transported (e.g. liquid and dry chemicals). The specialized carrier market is characterized by closed loop operation and trucks often operate with 50 percent empty miles.</p>
Class 1 Railroad	<p>The largest rail carriers in the U.S., classified by operating revenue. Currently Class I carriers have operating revenue exceeding \$319.3 million. Currently seven railroads operating in the U.S. are classified as Class I, including BNSF and Union Pacific in the Western U.S.</p>
Distribution Center	<p>Warehousing facilities, where typically like commodities in containers or truck-load lots are resorted into mixed truck loads for distribution to retail outlets or customers.</p>
Drayage Carrier	<p>The service offered by a motor carrier for pick-up and delivery of ocean, rail or air cargo containers.</p>
Inbound Freight Flows	<p>The freight that originates outside a particular state or region and terminates in that state or region</p>
Internal Flows	<p>Freight that originates and terminates within a particular state or region.</p>
Just-in-Time Inventory System	<p>An inventory and inbound manufacturing strategy that smoothes material flows into assembly and manufacturing plants. The strategy seeks to minimize inventory investment by scheduling delivery of raw materials to the point where they are needed, at the precise time required.</p>
Less Than Truckload (LTL) and Small Package Carriers	<p>LTL carriers consolidate many smaller shipments from multiple shippers located in a common area or region; sort them at dock facilities according to common designation and then line-haul trailers to a destination dock for delivery.</p>

Outbound Freight Flows	The freight that originates in a particular state or region and terminates outside of that state or region.
Private Carriers	Unlike "for-hire" trucking services, private carrier fleets are operated by businesses whose primary business is something other than transportation. For instance, private carrier fleets may be operated by manufacturers, distributors, retailers, or other businesses operating trucks as an internal value-added function primarily to meet their own business shipping needs. While private truck fleets primarily serve a single company, private carriers are allowed to sell unused backhaul capacity on a for-hire basis. Wal-Mart is an example of a private carrier.
Supply Chain	A group of physical entities, such as manufacturing plants, distribution centers, conveyances, retail outlets, people and information that are linked together through integrated processes (such as procurement or logistics) to supply goods or services from source through consumption.
Third party logistics (3PL)	A firm that specializes in logistics services that are provided to other companies.
Through-Freight Flows (Overhead flows)	Freight traffic volumes that originate and terminate beyond the borders of a state or region, but that use transportation infrastructure of the state or region during transit.
Trans-loading	The practice of transferring product between truck and rail transportation. It allows shippers and receivers to enjoy the cost benefits of rail transportation without having a rail siding at their door—at the least an expensive proposition, and for many companies, a physical impossibility. In most instances, a third-party logistics trans-load facility operator, or transportation broker facilitates trans-loading for both the shipper and receiver. These companies coordinate truck and rail connections and frequently offer warehousing and inventory management services to facilitate storage and delivery.
Truckload Carrier	The truckload (TL) motor carrier segment generally does not operate across a regular route, but rather delivers shipments directly to a recipient and try to pick up another truckload shipment at or near the first delivery point for a "backhaul" load. TL carriers generally have little need for extensive terminal or warehousing facilities.

Notes:

Information on trucking industry segments provided by the American Transportation Research Institute (ATRI), and adapted from the American Trucking Trends 2004, American Trucking Association.

Information on Class I railroads taken from wikipedia.com

Trans-loading definition taken from: *Shouldn't you be transloading?* John Paul Quinn
Logistics Management May 1, 2005. <http://www.logisticsmgmt.com>

FREIGHT PROFILE OF THE INLAND PACIFIC HUB STUDY AREA

Commodities that flow into, out-of, within and through the Inland Pacific Hub (IPH) study area reflect the region's economic base. Understanding freight flows in the region is one of the initial steps needed to gain a clear understanding of the economic activity of the area and how that affects the transportation network.

Information in this Technical Memorandum is presented in a top down format. Summary tables, details and charts are presented in the following sequence:

- regional summary
- mode summary
- county cluster summary
- individual county summary
- commodity detail
- import and export detail

The main information resource for this analysis is Global Insight, Inc.'s 2007 TRANSEARCH™ database. TRANSEARCH™ is one of the most comprehensive databases in use today to describe how freight moves between various markets. The TRANSEARCH™ dataset purchased by the IPH for this study contained over 470,000 freight records depicting the nature of freight movements between:

- 19 counties within the IPH study area
- 19 IPH study area counties and all of the business economic areas (BEAs) within the U.S.
- 19 IPH study area counties and areas in Canada or Mexico that have imports or exports with the IPH.

Appendix A provides additional information about the data sources and procedures used in assembling TRANSEARCH™.

Each TRANSEARCH™ data record indicated:

- origin and destination
- type of commodity
- mode of transportation
- tons and value

The dataset contained 2007 actual data as the base year and provided forecasts for 2012, 2017 and 2027. In the body of this study, the 2007 actual data and the 2027 forecast year were observed for changes in commodity flows. **Appendix B** exhibits data that compares 2007 with the 2012 forecast. **Appendix C** exhibits data that compares 2007 with the 2017 forecast.

To assist in conducting the analysis of TRANSEARCH™ data, Wilbur Smith Associates (WSA) constructed a customized spreadsheet application referred to as the FreightMode Analyzer. Upon completion of the study, the IPH team will retain a fully functioning version of the FreightMode Analyzer to further investigate in detail how freight flows may change by each county, commodity and mode. The IPH team can use the FreightMode Analyzer to assist in further economic development planning for the IPH.

TRANSEARCH™ datasets are modeled from inputs from various sources. As with any modeling activity, forecast totals depicted at a national or regional level have more cumulative precision than any of the subtotal predictions. The modeling in this study attempts to depict forecast amounts down to the county level. Also, the further into future the study timeframe extends (20 years for this study), the less precision and certainty that can be expected from the forecasts. As such, the forecast amounts should be considered as guidance to identify distribution trends but not actual future amounts.

REGIONAL SUMMARY

COMMODITY FLOWS BY DIRECTION AND MODE

Based on the 2007 TRANSEARCH™ database, over 167 million tons of freight moved on the transportation system into, out-of, within and through the IPH study area by truck, air, rail and water. Total tonnage of 2007 freight flows for all freight in the IPH study area is summarized in **Exhibit 1**. The mode is displayed across the top of the table and the direction is indicated along the left hand column.

Exhibit 1: Total Freight Flow Tonnage by Mode and Direction

Freight Flow Direction	2007 Tonnage of IPH's Freight Flows					Direction %
	Truck	Rail	Water	Air	Total	
Internal In Study Area	13,729,929	98,020	2,131	128	13,830,208	8.3%
Inbound						
From West	12,628,000	566,796	1,529,204	5,571	14,729,572	
From East	2,412,529	3,871,676		11,847	6,296,052	
From North	620,627	788,504		108	1,409,239	
From South	3,007,499	136,040		1,345	3,144,884	
Inbound Subtotal	18,668,655	5,363,016	1,529,204	18,872	25,579,747	15.3%
Outbound						
To West	13,882,365	5,089,955	3,056,087	24,148	22,052,555	
To East	5,054,659	1,731,852		1,479	6,787,990	
To North	793,829	143,836		17,683	955,348	
To South	9,280,323	847,560		939	10,128,822	
Outbound Subtotal	29,011,177	7,813,203	3,056,087	44,249	39,924,715	23.9%
Internal + Inbound + Outbound	61,409,761	13,274,239	4,587,422	63,248	79,334,670	47.4%
Combined Truck + Rail	74,684,000					
Through Traffic	29,690,825	58,308,175			87,999,000	52.6%
Total For All Traffic	91,100,586	71,582,414	4,587,422	63,248	167,333,670	100.0%
Mode Distribution %	54.4%	42.8%	2.74%	0.04%	100.0%	
Combined Truck + Rail	97.2%					

Data Source for all Tables: Global Insight 2007 TRANSEARCH™ Data

THROUGH-FREIGHT'S IMPACT ON THE IPH STUDY AREA

The largest share of tonnage in the IPH study area is for through-freight that does not stop in the region (third row from the bottom). In 2007, almost 88 million tons of freight or 52.6 percent of the total tonnage was through-freight (Exhibit 2). The percentage of through-freight that moves across the region places demands on the capacity and preservation of the regional highway and rail transportation system, but aside from jobs related to transportation support services (truck stops, lodging, freight transfer terminals, etc.) through-freight which does not stop does not create significant industry in the IPH study area. Through-freight is less connected to the region's economic activity than inbound or outbound freight which supports jobs at factories, stores and other businesses. Through-freight typically moves along national freight corridors such as I-90 or along the major rail lines.

International import freight that arrives in containers at the ports in Seattle, Tacoma or Portland is moved by truck or train to inland destinations. Containerized freight moved eastbound by intermodal trains for delivery to Chicago, Memphis and other inland points is the major type of through-freight. Intermodal through-freight typically does not stop during the rail journey to the inland destinations, except for train crew changes or maintenance. Conversely, freight moved westbound from the Midwest and other inland origins moved by truck or rail and destined to Seattle, Tacoma or Portland for export or for consumption in those cities typically does not stop in the IPH study area except for transportation service activities such as refueling or lodging. Since through-freight does not stop in the IPH study area, it is unlikely that locating a regional hub in the IPH study area would significantly alter movements of through-freight along I-90 or the rail lines.

Freight moved eastbound by truck to inland destinations beyond the IPH study area is one version of through-freight. This type is typically trans-loaded from the ISO 20-foot or 40-foot international containers into larger 53-foot domestic truck trailers for a more economical journey to the hinterland.

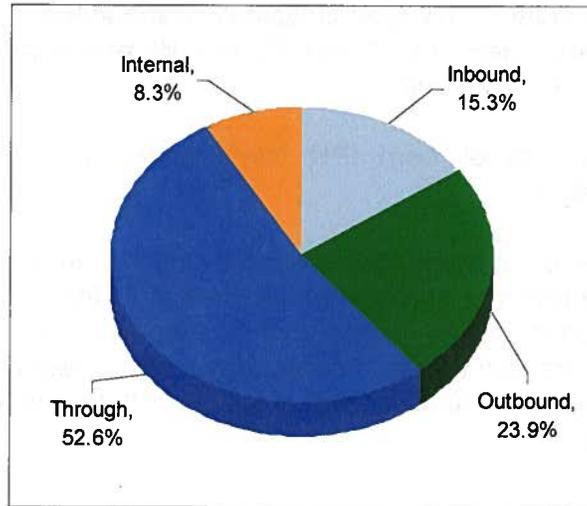
Freight moved by truck to or from IPH study area origins or destinations is not considered through-freight.

Understanding the amount of truck freight is important because the large percentage of truck through-freight enjoys the use and public benefit of the IPH study area's highway system. Freight increases or decreases can be used by public officials as a traffic volume guideline for managing the maintenance and preservation of the highway system. A multi-jurisdictional approach will assist in understanding, scoping, prioritizing and funding such issues as:

- location of economic developments
- route management and diversions
- right-of-way acquisitions
- rail access
- highway and bridge maintenance
- carbon impacts
- linkage of intelligent highway systems.

This is clearly evident in the need for a by-pass route for traffic using US-95. It causes a local congestion problem north of Coeur d'Alene and it affects regional traffic. US-95 requires a regional solution. It is noteworthy that the IPH study area is a forerunner in assembling this public/private multi-jurisdictional project team to address such issues as US-95. An average daily vehicle and truck traffic analysis for the IPH study area's highways is beyond the scope of this study. It is the freight forecasts from this study that can indicate in which direction and based on tonnage forecasts, how much will highway and rail utilization change over time.

Exhibit 2: 2007 Direction of Flows by Tonnage



IPH STUDY AREA OUTBOUND FREIGHT

Outbound freight represented almost 40 million tons or 23.9 percent of the total tonnage. Outbound freight flows are the result of a local work effort generally in agriculture, mining, forest products, food processing, etc. in the IPH study area. These products leave the IPH study area for consumption in other parts of the state, the U.S. or internationally and contribute income to the economic base of the region. Using the FreightMode Analyzer, we can observe for 2007 and the forecast years which commodities are moving out of the study area toward the west, east, north and south. The results of these observations appear further in this study in Exhibit 8 through Exhibit 35.

IPH STUDY AREA INBOUND FREIGHT

Inbound freight represented 15.3 percent of the total tonnage. Inbound freight typically results in job activities in the distribution industry, retail, and manufacturing (raw materials or sub-components). Inbound freight provides many of the supplies needed for service industries.

IPH STUDY AREA INTERNAL FREIGHT

Internal freight represents freight that originates and terminates at an origin or destination point within any of the 19 counties in the IPH study area. Internal freight amounted to 8.3 percent of the total tonnage. Internal freight also results in jobs in the distribution industry, retail, and manufacturing, and provides many of the supplies needed for service industries. However, internal freight does not necessarily attract revenues from outside the area to contribute to the economic and tax base of the IPH study area, with the exception of tourism.

Truck and rail total tonnage for local, inbound and outbound freight, basically the tonnage generating commerce for the IPH study area, amounted to 74.68 million tons.

MODE SUMMARY

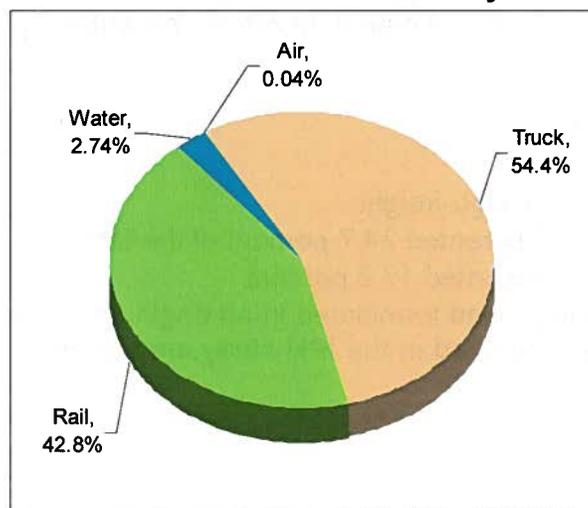
FREIGHT MODES

By mode, trucks handle the largest proportion of the IPH study area's freight tonnage (**Exhibit 3**). In 2007, tonnage by mode was distributed as:

- 91 million tons of freight or 54 percent of the tonnage was moved by truck
- rail accounted for 71 million tons of freight or 43 percent
- water borne freight, mostly agriculturally derived products out of Whitman, Columbia, Garfield, Nez Perce, and Asotin counties accounted for 4.6 million tons of freight or 3 percent
- air freight out of Spokane amounted to 63,000 tons, which was 0.04 percent. The TRANSEARCH™ dataset for airfreight may not capture all private airfreight activity, thus the activity at Coeur d'Alene airport, assumed to be small for the overall study, may be unreported and under represented.

Because the vast majority of freight in the IPH study area moves by truck and rail, the analysis in this working paper will focus on truck and rail, and their impact on the highway and rail networks. Airfreight is broken out toward the end in the section examining the Central Counties because that is where 99.99 percent of the commercial airfreight occurs and there is minimal impact on the other IPH study area counties. Freight transported by water on the Snake River is a factor for the Southern Counties and additional charts and tables are provided toward the end of the Southern Counties analysis section to indicate tonnage without and with waterborne freight. The other IPH study area counties do not have navigable rivers for waterborne freight transport. Unless airfreight or waterborne freight is specifically indicated in the section or exhibit title, the content refers to highway and rail freight.

Exhibit 3: 2007 Mode Distribution by Tonnage



Global Insight TRANSEARCH™ data shows the 2007 value of freight that moved in the IPH study area was \$469 billion (**Exhibit 4**). Nearly \$254 billion or 54.1 percent of that value was associated with through-freight. Of the remaining value of the freight movements, 24.7 percent was for outbound, 17.8 percent was for inbound and 3.3 percent was for internal freight.

Exhibit 4: Total Freight Flow Value by Mode and Direction

Freight Flow Direction	2007 Values of IPH's Freight Flows					Direction %
	Truck	Rail	Water	Air	Total	
Internal In Study Area	\$15,528,157,528	\$127,433,177	\$305,345	\$74,638	\$15,655,970,688	3.3%
Inbound						
From West	\$49,816,586,355	\$194,732,112	\$897,076,992	\$104,421,505	\$51,012,816,964	
From East	\$9,234,071,885	\$3,004,814,928		\$52,376,300	\$12,291,263,114	
From North	\$735,807,539	\$436,151,833		\$2,518,364	\$1,174,477,736	
From South	\$19,168,430,874	\$102,856,249		\$14,320,497	\$19,285,607,620	
Inbound Subtotal	\$78,954,896,654	\$3,738,555,123	\$897,076,992	\$173,636,666	\$83,764,165,434	17.8%
Outbound						
To West	\$64,109,180,356	\$574,033,125	\$1,116,556,661	\$107,450,549	\$65,907,220,691	
To East	\$22,916,730,677	\$2,090,809,653		\$29,881,978	\$25,037,422,308	
To North	\$500,528,618	\$65,457,653		\$54,628,891	\$620,615,162	
To South	\$23,319,455,177	\$916,760,635		\$8,452,422	\$24,244,668,234	
Outbound Subtotal	\$110,845,894,829	\$3,647,061,066	\$1,116,556,661	\$200,413,840	\$115,809,926,395	24.7%
Internal + Inbound + Outbound	\$205,328,949,011	\$7,513,049,366	\$2,013,938,997	\$374,125,144	\$215,230,062,518	45.9%
Combined Truck + Rail	\$212,841,998,377					
Through Traffic	\$166,236,598,903	\$87,894,365,480			\$254,130,964,383	54.1%
Total For All Traffic	\$371,565,547,913	\$95,407,414,846	\$2,013,938,997	\$374,125,144	\$469,361,026,900	100.0%

Mode Distribution %	79.2%	20.3%	0.43%	0.08%	100.0%
Combined Truck + Rail	99.5%				

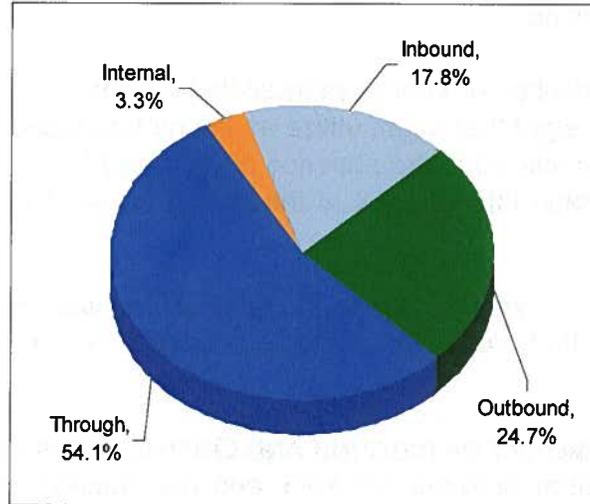
Source for all Tables: Global Insight 2007 TRANSEARCH™ Data

By mode of transportation, 79.2 percent of the value of the freight was moved by truck, with 20.3 percent moved by rail, 0.4 percent moved by water and 0.1 percent moved by air freight.

By value, in 2007 (**Exhibit 5**):

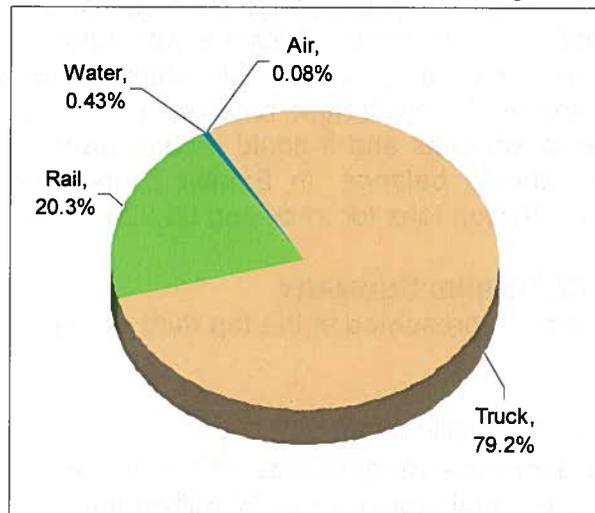
- 54.1 percent was through-freight
- outbound freight represented 24.7 percent of the total value
- inbound freight represented 17.8 percent
- freight that originated and terminated in an origin and destination point within any of the 19 counties covered in the IPH study area amounted to 3.3 percent of the total value.

Exhibit 5: 2007 Direction of Flows by Value



Trucks handled a higher proportion of the value of the freight at 79.2 percent (**Exhibit 6**) compared to truck's proportion of the tonnage at 54.4 percent as shown in Exhibit 3. This disparity in proportion reflects the nature of truck freight. Commodities typically moved by truck, such as electronics, apparel, food, and consumer goods, are more valuable per transported pound and are more time sensitive because of their shorter retail shelf life. By comparison, commodities moving on rail, such as grain, lumber, coal and minerals, are typically heavier, denser and less valuable per transported pound and are not as time sensitive for delivery. The heavier and denser freight can take advantage of the savings produced by moving on the slower and less expensive rail service verses moving by the faster and more expensive truck service. Thus, even though fewer tons are transported by truck than by rail, the total value of the freight transported by truck is much higher.

Exhibit 6: 2007 Mode Distribution by Value



Analysis of commodity flows within the context of the IPH study area's economic base provides an understanding of:

- the nature of existing commodity markets in the region
- the amount of freight that might utilize an inland hub facility
- modes currently utilized in the absence of an inland hub
- the role of drayage into and out of the region involved in the overall commodity flows

The following analysis explores these questions, as well as anticipated shifts in commodity markets that may be expected based on the 2027 forecast from TRANSEARCH™.

IPH STUDY AREA SUMMARY OF INBOUND AND OUTBOUND FREIGHT FLOWS

Exhibit 7 brings together amounts for truck and rail tonnage to create a summary of IPH study area's local, inbound and outbound freight. In 2007 there were 74.7 million tons in the three categories (at the bottom of Exhibit 7 in the right column). In Exhibit 1 the total tonnage for the IPH study area was 167.3 million tons for all modes in all directions. That total of 167.3 million tons was comprised of 87.9 million tons of through-freight for truck and rail, 4.6 million tons for water freight, 63.3 tons of air freight and the 74.7 million tons from Exhibit 7. It is the 74.7 million tons that will be discussed in more detail in the next section.

In Exhibit 7, titles across the top row of the columns depict the direction which influence the freight flows. The titles across the top also indicate the major highways that truck freight would most likely utilize. There are columns for each of the flow directions: the first is for local freight that circulated within the region, and directional flows with the markets in the west, east, north and south.

Local freight accounted for approximately 13.8 million tons within the study area (see the bottom rows for the combined total for local freight). The key concept in measuring local freight is that total inbound should balance with total outbound. It is a closed system in which the total amount of local freight shipped out by all shippers should equate to the total amount of local freight received by all consignees. Each county cluster could ship varying amounts and it could receive varying amounts, but the total outbound and inbound should balance. In Exhibit 7, the amounts for inbound and outbound balance at 13.7 million tons for truck and 98,020 for rail.

TRUCK INBOUND AND OUTBOUND SUMMARY

Truck summary information is presented in the top third of Exhibit 7. Total truck tonnage for 2007 is 61.4 million:

- local tonnage was 13.7 million tons
- inbound from all directional markets was 18.7 million tons
- outbound to all directional markets was 29 million tons.

Truck tonnage is forecast to grow 13.4 percent and reach 48.5 million by 2027:

- local freight is forecast to grow to 15.33 million tons, an increase of 11.7 percent
- inbound is forecast to grow to 39.64 million tons for an increase of 22.3 percent
- outbound is forecast to grow to 48.48 million tons for a decrease of 13.4 percent.

Truck is by far the dominant mode in the IPH study area at 82.2 percent over rail in 2007. The forecast is for truck to increase its proportion of the freight moved, up to 84.4 percent in 2027.

RAIL INBOUND AND OUTBOUND SUMMARY

Rail summary information is presented in the middle third of Exhibit 7. Total rail tonnage for 2007 is 13.3 million:

- local tonnage was 98,020 tons
- inbound from all directional markets was 5.46 million tons
- outbound to all directional markets was 7.91 million tons

Rail tonnage is forecast to grow 1 percent and reach 13.4 million by 2027:

- local freight is forecast to drop to 49,666 tons, a decrease of 49 percent
- inbound is forecast to grow to 6.49 million tons for an increase of 18.8 percent
- outbound is forecast to drop to 6.97 million tons for a decrease of 11.8 percent

This indicates commerce will continue to use rail to bring products into the IPH study area but will be converting from rail to truck to send its products out of the region to those markets, or that the commodities that usually ship by rail will be decreasing in total tonnage produced.

The way coal is reported in the TRANSEARCH™ data adds tonnage to rail's inbound and outbound tonnage that needs to be clarified. Coal freight is interchanged in the IPH study area between two Class I railroads. TRANSEARCH™ classifies the coal tonnage as 2.5 million tons inbound on one railroad and 2.5 million tons outbound on the other railroad. Without the interchange, the coal tonnage could be considered as through-freight as it is not consumed in the region, and the tonnage could be omitted from the inbound and outbound tables. If the 5 million tons were removed from the inbound and outbound total, the resulting total would be 8.3 million tons. However, coal's tonnage was retained in both the inbound and outbound summaries to maintain the rail waybill dataset integrity.

Exhibit 7: Summary of IPH Study Area Inbound and Outbound Freight Flows

IPH Countries Tonnage Summary		Local Freight Circulates Between IPH Counties		Western Flows: Routes = I-90, US2, US12, US20		Eastern Flows: Routes = I-90, US2, US12, ID200		Northern Flows: Routes = US95, US195, US395		Southern Flows: Routes = US95, US195, US395		Totals	
Truck Summary	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck Total
Truck Inbound From:	2007	Tonnage	13,729,929		12,628,000		2,412,529		620,627		3,007,499		32,398,584
	2027	Tonnage	15,332,605		15,089,386		3,428,582		948,797		4,836,659		39,636,029
		% vs 2007	11.67%		19.49%		42.12%		52.88%		60.82%		22.34%
Truck Outbound To:	2007	Tonnage	13,729,929		13,882,365		5,064,659		793,829		9,280,323		42,741,106
	2027	Tonnage	15,332,605		16,748,903		6,056,097		1,209,502		9,024,875		48,371,981
		% vs 2007	11.67%		20.65%		19.81%		52.38%		(2.75%)		13.17%
Truck Total	2007	Tonnage	13,729,929		26,510,365		7,467,188		1,414,456		12,287,822		61,409,761
	2027	Tonnage	15,332,605		31,838,289		9,597,171		2,158,299		13,861,534		72,787,898
		% vs 2007	11.67%		20.10%		28.52%		52.59%		12.81%		18.53%
Rail Summary		Year	Data	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail	Rail Total
Rail Inbound From:	2007	Tonnage		98,020		566,796		3,871,676		788,504		136,040	5,461,036
	2027	Tonnage		49,666		543,055		4,700,665		1,050,633		144,635	6,488,653
		% vs 2007		(49.33%)		(4.19%)		21.41%		33.24%		6.32%	18.82%
Rail Outbound To:	2007	Tonnage		98,020		5,089,955		1,731,852		143,836		847,560	7,911,223
	2027	Tonnage		49,666		4,765,369		1,333,211		219,469		604,868	6,972,583
		% vs 2007		(49.33%)		(6.38%)		(23.02%)		52.58%		(28.63%)	(11.86%)
Rail Total	2007	Tonnage		98,020		5,656,751		5,603,528		932,340		983,600	13,274,239
	2027	Tonnage		49,666		5,308,424		6,033,876		1,270,102		749,504	13,411,570
		% vs 2007		(49.33%)		(6.16%)		7.68%		36.23%		(23.80%)	1.03%
Combined Summary		Year	Data	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Truck + Rail	Total
Truck + Rail Inbound	2007	Tonnage	13,827,949		13,194,796		6,284,205		1,409,131		3,143,539		37,859,620
	2027	Tonnage	15,382,270		15,632,441		8,129,247		1,999,430		4,981,294		46,124,682
		% vs 2007	11.24%		18.47%		29.36%		41.89%		58.46%		21.83%
Truck + Rail Outbound	2007	Tonnage	13,827,949		18,972,320		6,786,511		937,665		10,127,883		50,652,329
	2027	Tonnage	15,382,270		21,514,272		7,389,308		1,428,971		9,629,743		55,344,564
		% vs 2007	11.24%		13.40%		8.88%		52.40%		(4.92%)		9.26%
Truck + Rail Total	2007	Tonnage	13,827,949		32,167,116		13,070,716		2,346,796		13,271,422		74,684,000
	2027	Tonnage	15,382,270		37,146,713		15,518,555		3,428,401		14,611,037		86,086,976
		% vs 2007	11.24%		15.48%		19.59%		46.09%		10.09%		15.27%

Note: See Appendix D: TRANSEARCH™ Data Errata

COUNTY CLUSTERS SUMMARY

THREE COUNTY CLUSTERS

Similar geographic terrain and economic composition in the IPH study area led dividing the study area into a Northern, Central and Southern region to facilitate the freight profiling (**Exhibit 8**).

The Northern region is mountainous and has rolling foothills. It is sparsely populated and produces a significant amount of lumber and wood products. The Northern region contains five counties:

- Ferry, WA
- Stevens, WA
- Pend Oreille, WA
- Boundary, ID
- Bonner, ID

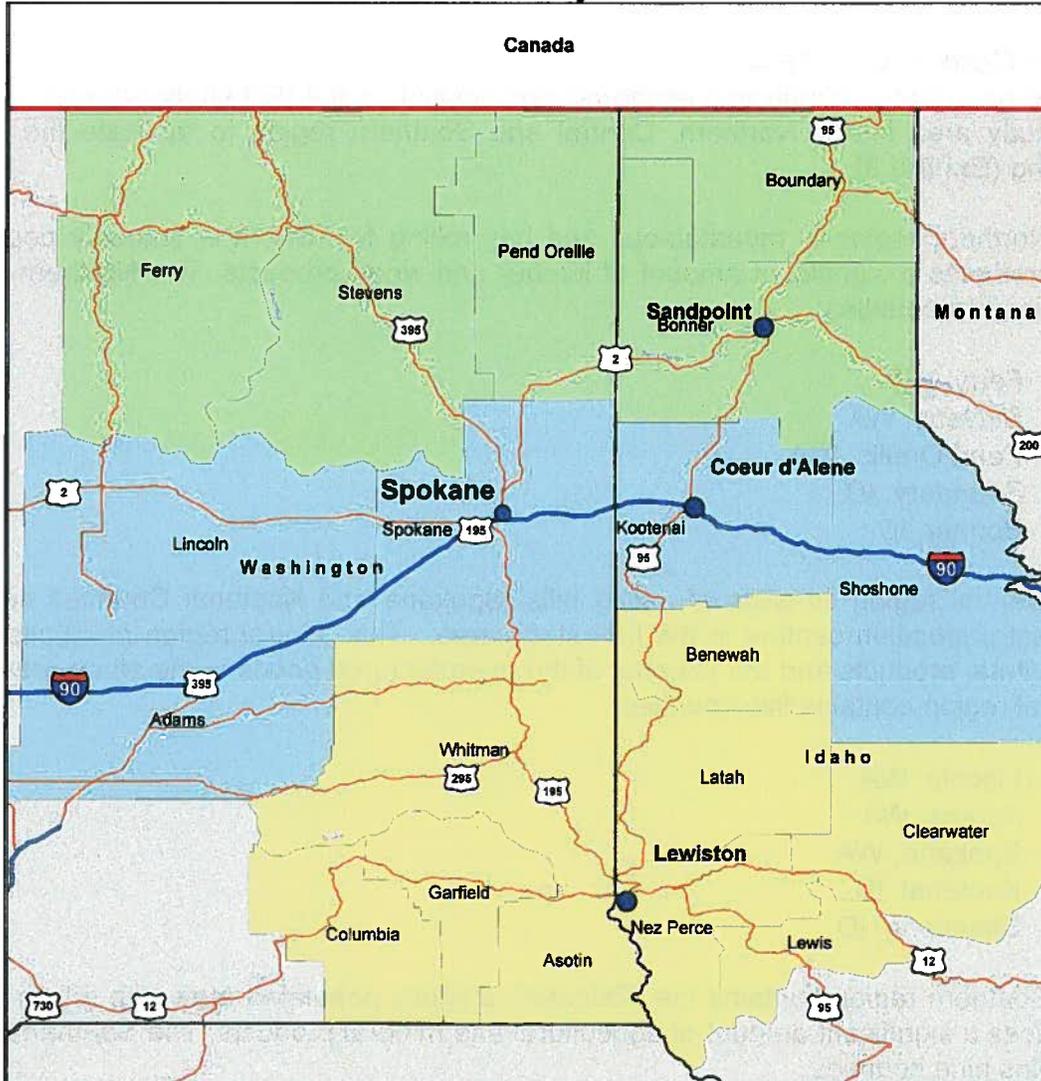
The Central region consists of rolling hills. Spokane and Kootenai Counties hold the densest population centers in the IPH study area. The Central region produces many agricultural products and the majority of the manufactured goods in the study area. The Central region contains five counties:

- Lincoln, WA
- Adams, WA
- Spokane, WA
- Kootenai, ID
- Shoshone, ID

The Southern region contains the “Palouse”, a lightly populated area with rolling hills. It produces a significant amount of agricultural and mineral products. The Southern region contains nine counties:

- Columbia, WA
- Garfield, WA
- Asotin, WA
- Whitman, WA
- Benewah, ID
- Latah, ID
- Nez Perce, ID
- Lewis, ID
- Clearwater, ID

Exhibit 8: County Clusters



FREIGHT FLOWS IN THE COUNTY CLUSTERS

Freight flows were studied by mode and direction. The vast majority of the freight (99.5 percent) moved by truck or rail, and the study focuses on these two modes. Direction of the freight flows was observed to determine not only destination, but to assist in understanding the impact on the main highway corridors in the IPH study area. Directional flows were classified into five groups:

- local freight that circulates within the region
- inbound or outbound directional flows to or from the West
- inbound or outbound directional flows to or from the East
- inbound or outbound directional flows to or from the North
- inbound or outbound directional flows to or from the South

Truck freight to and from the West mainly uses Interstate 90, and highways such as US2, US12 and US20. Westbound freight moves between the IPH study area and western Washington including the Ports of Seattle, Tacoma and Vancouver for international freight, and Oregon accessing the Port of Portland for international freight.

Truck freight traveling to and from the east use Interstate 90 and highways US2, US12 and ID-200. Eastbound freight moves between the IPH study area and all eastern markets in the Mountain States, Midwest, Northeast, Southeast and South Central. Some of the eastern freight can be accounted as international imports or exports that would enter or exit the East Coast and Gulf Coast ports.

Truck freight to and from the north uses highways US-95, US-195 and US-395. Northbound freight moves between the IPH and Canada.

Truck freight traveling to and from the south use highways US-95, US-195 and US-395. Southbound freight moves between the IPH study area and California, Utah, Nevada, Arizona and Mexico.

Rail freight mainly flows east-west on two Class I railroads; the Union Pacific Railroad (UP) and the Burlington Northern Santa Fe Railway (BNSF). One Class II railroad, the Montana Rail Link (MRL) serves the region.

- The UP rail line follows the Snake River in southeastern Washington, enters the IPH in Adams County, then up to Spokane, Sandpoint and on to Eastport at the Canadian border where there is an interchange with the Canadian Pacific Railroad. Branch lines serve Coeur d'Alene and Plummer.
- The BNSF has two rail lines. The northern line runs from Seattle across the Cascades and enters the IPH in Lincoln County. It proceeds to Spokane with a branch line to Coeur d'Alene, then runs to Sandpoint and Bonners Ferry and onto the Montana border to connect to the eastern markets. The southern line from Portland enters the IPH at Ritzville and parallels US-395 to Spokane. Between Spokane and Sandpoint there is a single BNSF main line.
- The MRL and the other 8 Short Line railroads operate on over 900 miles of track and reach most areas in the IPH study area (see Tech Memo 1 for a further description of railroad service in the IPH study area).
- The MRL carries freight on its own line from Sandpoint east into Montana to connect with eastern markets. MRL has trackage rights on the BNSF line between Spokane and Sandpoint.

Most of the Class I rail activity involves east/west doublestack intermodal service that passes through the IPH study area without stopping as it connects the Ports of Seattle, Tacoma and Portland with the Midwest and other eastern markets. Since through-freight on the Class I railroads contribute little to the IPH study area's inbound or

outbound economy, through truck and rail tonnage has been omitted from the study analysis.

INBOUND AND OUTBOUND TONNAGE SUMMARY

The next step is to disaggregate the flows to match the three county clusters that have been identified. The TRANSEARCH™ dataset enables depiction of each cluster's tonnage by inbound and outbound direction, by mode, and by year (**Exhibit 9**) for the Northern and Central Counties (**Exhibit 10**) and for the Southern Counties and the Combined Totals. The table shows tonnage for truck and rail and the combination of the two. It also shows the amount of growth or contraction between 2007 and 2027. The amounts in this table match all preceding and succeeding tables.

Northern Counties will see a rise from 16.25 million tons in 2007 to 17.26 million tons in 2027, an increase of 6.19 percent.

- Inbound freight will see an overall increase of 1.37 million tons or 31.45 percent. Local inbound freight will increase 194,000 tons. Most of the inbound increase will come from the west at 590,000 tons and the south at 419,000 tons.
- Outbound freight will see an overall decrease of 363,000 tons or 3.05 percent. Local freight will decrease by 442,000 tons and southern outbound freight will decrease by 653,000 tons. There will be a gain in outbound freight to the west at 624,000 tons and to the east at 274,000 tons, but these do not offset the other decreases.

Central Counties will see a rise from 53.45 million tons in 2007 to 57.92 million tons in 2027, an increase of 8.36 percent.

- Inbound freight will see an overall increase of 3.98 million tons or 14.97 percent. Local inbound freight will increase 73,000 tons. Most of the inbound increase will come from the west at 1.49 million tons, the east at 1.38 million tons, the north at 344,000 tons and the south at 668,000 tons.
- Outbound freight will see an overall increase of 484,000 tons or 1.80 percent. Local freight will increase by 1.31 million tons, the east at 541,000 tons, the north at 305,000 tons, and the south at 397,000 tons. There will be a decrease for outbound to the west at 597,000 tons.

Southern Counties will see a rise from 19.79 million tons in 2007 to 26.39 million tons in 2027, an increase of 40.42 percent.

- Inbound freight will see an overall increase of 2.91 million tons or 42.19 percent. Local inbound freight will increase 194,000 tons, from the west at 342,000 tons, the east at 307,000 tons, the north at 97,000 tons and the south at 739,000 tons.
- Outbound freight will see an overall increase of 4.68 million tons or 39.38 percent. Local freight will increase by 2.02 million tons, from the west at 2.41 million tons, the east at 152,000 tons, the north at 45,000 tons and the south at 151,000 tons.

Combined for all Counties will see a rise from 74.68 million tons in 2007 to 86.19 million tons in 2027, an increase of 15.42 percent.

- Inbound freight will see an overall increase of 8.26 million tons or 21.83 percent. Local inbound freight will increase 1.55 million tons, from the west at 2.43 million tons, the east at 1.84 million tons, the north at 590,000 tons and the south at 1.69 million tons.
- Outbound freight will see an overall increase of 4.80 million tons or 9.49 percent. Local freight will increase by 1.65 million tons, from the west at 2.54 million tons, the east at 715,000 tons, and the north at 491,000 tons. Outbound to the south will decrease by 498,000 tons.

Exhibit 9: Tonnage Summary for Northern and Central Clusters

IPH Counties Tonnage Summary		Local Traffic Circulates Between IPH Counties		Western Flows: Routes = I-90, US2, US12, US20		Eastern Flows: Routes = I-90, US2, US12, ID200		Northern Flows: Routes = US95, US195, US395		Southern Flows: Routes = US95, US195, US395		Commodity Total	
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	
Northern Counties Inbound From:	2007	Tonnage Combined	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
	2027	Tonnage	1,399,844		1,760,995		327,743		174,597		692,744		
		Tonnage	1,522,784	27,185	2,287,373	57,340	437,724	28,323	248,274	9,960	1,087,646	19,080	
		Combined	1,549,969		2,344,713		466,048		258,234		1,106,726		
	% vs 2007		14.59% (61.69%)	10.72%	34.72% (9.21%)	33.15%	43.37% (26.22%)	42.20%	51.32% (5.32%)	47.90%	62.47% (18.04%)	59.76%	31.45%
Northern Counties Outbound To:	2007	Tonnage Combined	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
	2027	Tonnage	4,423,096		3,078,253		1,711,297		342,034		2,347,370		
		Tonnage	3,900,678	36,377	3,192,727	613,742	1,316,506	480,950	274,471	209,557	1,145,575	368,529	
		Combined	3,937,054		3,806,469		1,797,456		484,029		1,514,103		
	% vs 2007		(10.16%) (55.33%)	(10.99%)	24.36% (20.13%)	23.66%	26.24% (28.05%)	5.03%	34.68% (51.59%)	41.51%	(36.30%) (32.87%)	(35.50%)	(3.05%)
Northern Counties Subtotal	2007	Tonnage Combined	5,670,540	152,400	4,265,179	574,070	1,348,160	690,880	367,875	148,756	2,467,834	572,280	16,257,974
	2027	Tonnage	5,822,940		4,839,249		2,039,040		516,631		3,040,114		
		Tonnage	5,423,461	63,562	5,480,100	671,082	1,754,231	509,273	522,745	219,518	2,233,221	387,609	
		Combined	5,487,023		6,151,182		2,263,504		742,263		2,620,830		
	% vs 2007		(4.36%) (58.29%)	(5.77%)	28.48% (16.90%)	27.11%	30.12% (26.29%)	11.01%	42.10% (47.57%)	43.67%	(9.51%) (32.27%)	(13.79%)	6.19%
Central Counties Inbound From:	2007	Tonnage Combined	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
	2027	Tonnage	8,890,762		10,266,649		5,195,672		878,152		1,368,313		
		Tonnage	8,963,653	16,666	11,387,489	374,291	2,066,116	4,514,451	413,635	808,568	1,955,799	81,053	
		Combined	8,980,319		11,761,781		6,580,567		1,222,203		2,036,852		
	% vs 2007		1.07% (24.40%)	1.01%	15.52% (6.53%)	14.56%	38.70% (21.81%)	26.65%	55.08% (32.24%)	39.18%	52.37% (4.33%)	48.86%	14.97%
Central Counties Outbound To:	2007	Tonnage Combined	4,525,735	12,780	9,851,478	4,501,373	2,171,372	765,092	488,395	5,600	4,354,699	181,840	26,858,363
	2027	Tonnage	4,538,515		14,352,851		2,936,464		493,995		4,536,539		
		Tonnage	4,548,687	10,635	9,661,670	4,093,838	2,859,464	618,081	788,844	9,911	4,600,841	150,639	
		Combined	4,559,322		13,755,508		3,477,544		798,755		4,751,481		
	% vs 2007		0.51% (16.78%)	0.46%	(1.93%) (9.05%)	(4.16%)	31.69% (19.21%)	18.43%	61.52% (76.99%)	61.69%	5.65% (17.16%)	4.74%	1.80%
Central Counties Subtotal	2007	Tonnage Combined	13,394,453	34,824	19,708,931	4,910,569	3,660,975	4,471,160	755,123	617,024	5,638,292	266,560	53,457,911
	2027	Tonnage	13,429,277		24,619,500		8,132,135		1,372,147		5,904,852		
		Tonnage	13,512,340	27,301	21,049,159	4,468,129	4,925,580	5,132,532	1,202,479	818,479	6,556,640	231,692	
		Combined	13,539,642		25,517,288		10,058,112		2,020,958		6,788,333		
	% vs 2007		0.88% (21.60%)	0.82%	6.80% (9.01%)	3.65%	34.54% (14.79%)	23.68%	59.24% (32.65%)	47.28%	16.29% (13.08%)	14.96%	8.36%

Exhibit 10: Tonnage Summary for Southern Cluster and All Clusters Combined

IPH Counties Tonnage Summary		Local Traffic Circulates Between IPH Counties		Western Flows: Routes = I-90, US2, US12, US20		Eastern Flows: Routes = I-90, US2, US12, ID200		Northern Flows: Routes = US95, US195, US395		Southern Flows: Routes = US95, US195, US395		Commodity Total		
County	Year	Data	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail	Truck	Rail		
Southern Counties Inbound From:	2007	Tonnage Combined	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	
	2027	Tonnage Combined	4,846,167	5,815	1,167,151	111,423	760,790	157,890	286,889	232,104	1,082,482	44,502		
		Tonnage Combined	4,851,982		1,525,947		1,082,631		518,993		1,837,716			9,817,269
		% vs 2007		37.19%	15.93%	31.86%	17.98%	49.73%	10.28%	51.14%	39.35%	69.77%		58.71%
Southern Counties Outbound To:	2007	Tonnage Combined	4,862,539	3,800	1,463,544	77,672	1,840,430	298,320	101,636	166,560	3,127,254	116,720	11,891,914	
	2027	Tonnage Combined	6,883,240	2,654	1,541,216	57,789	2,138,750	101,636	146,187	166,560	3,243,974	85,700		
		Tonnage Combined	6,885,894		3,952,295		1,992,619		146,187		3,278,459			16,575,335
		% vs 2007		41.56%	(30.16%)	166.10%	(25.60%)	8.27%	(21.50%)	43.83%	43.83%	4.84%		(26.58%)
Southern Counties Subtotal	2007	Tonnage Combined	8,394,866	8,816	2,536,255	172,112	2,458,052	441,488	291,458	166,560	4,181,696	144,760	18,796,063	
	2027	Tonnage Combined	11,729,408	8,469	2,708,367	169,213	2,899,540	392,070	433,076	232,104	4,326,456	130,203		
		Tonnage Combined	11,737,876		5,478,242		3,309,431		665,180		5,071,672			26,392,604
		% vs 2007		39.72%	(3.94%)	109.33%	(1.68%)	18.69%	(11.19%)	48.59%	39.35%	21.28%		(10.06%)
Combined IPH Counties Inbound From:	2007	Tonnage Combined	13,729,929	98,020	12,628,000	566,796	2,412,529	3,871,676	620,627	788,504	3,007,499	136,040	37,859,620	
	2027	Tonnage Combined	15,332,605	49,666	13,194,796	543,055	6,284,205	4,700,665	948,797	1,050,633	3,143,539	144,635		
		Tonnage Combined	15,382,270		15,632,441		8,129,247		1,999,430		4,981,294			46,124,682
		% vs 2007		11.67%	(49.33%)	19.49%	(4.19%)	42.12%	21.41%	52.88%	33.24%	60.82%		6.32%
Combined IPH Counties Outbound To:	2007	Tonnage Combined	13,729,929	98,020	13,882,365	5,089,955	5,054,659	1,731,852	793,829	143,836	9,280,323	847,560	50,652,329	
	2027	Tonnage Combined	15,332,605	49,666	18,972,320	4,765,369	6,786,511	1,333,211	937,665	219,469	10,127,883	604,868		
		Tonnage Combined	15,382,270		21,514,272		7,501,800		1,428,971		9,629,743			55,457,056
		% vs 2007		11.67%	(49.33%)	20.65%	(6.38%)	22.04%	(23.02%)	52.36%	52.58%	(2.75%)		(28.63%)
Combined IPH Counties Total	2007	Tonnage Combined	13,729,929	98,020	26,510,365	5,656,751	7,467,188	5,603,528	1,414,456	932,340	12,287,822	983,600	74,684,000	
	2027	Tonnage Combined	15,332,605	49,666	32,167,116	5,308,424	13,070,716	6,033,876	2,346,796	1,270,102	13,271,422	749,504		
		Tonnage Combined	15,382,270		37,146,713		15,631,046		3,428,401		14,611,037			86,199,468
		% vs 2007		11.67%	(49.33%)	20.10%	(6.16%)	28.52%	7.68%	52.59%	36.23%	12.81%		(23.80%)

RAIL CARLOAD AND INTERMODAL SUMMARY

Rail flows in the three county clusters show that carload freight is forecast to decrease and intermodal freight is forecast to grow (**Exhibit 11**). The table shows tonnage for carload and intermodal and the combination of the two. It also shows the amount of growth or contraction between 2007 and 2027.

Northern Counties will see a decrease in rail freight from a total of 2.13 million tons in 2007 down to 1.85 million tons in 2027, a decrease of 13.44 percent.

- Inbound rail freight is all carload that will see an overall decrease of 49,000 tons or 25.46 percent. Local inbound freight will decrease 43,000 tons, and from the west will decrease 6,000 tons, the north at 600 tons and from the south at 4,000 tons. The only inbound increase will come from the east at 6,000 tons.
- Outbound rail freight will see an overall decrease of 239,000 tons or 12.26 percent. Local freight will decrease by 45,000 tons, the east will decrease 188,000 tons and the south at 181,000 tons. There will be a gain outbound to the west at 103,000 tons and to the north at 71,000 tons.

Central Counties will see an increase in rail freight from a total of 10.30 million tons in 2007 to 10.67 million tons in 2027, an increase of 3.67 percent.

- Inbound rail freight will see an overall increase of 962,000 tons or 19.89 percent. Local inbound freight will decrease 5,000 tons, inbound carload from the west will decrease 36,000 tons and from the south at 3,000 tons. Inbound carload will increase from the east at 748,000 tons and from the north at 197,000 tons. Inbound intermodal will increase from the west at 1,700 tons and from the east at 200,000 tons.
- Outbound rail freight will see an overall decrease of 583,000 tons or 10.68 percent. Local freight will decrease by 2,000 tons, and outbound carload from the west will decrease 553,000 tons, from the east at 176,000 tons, and from the south at 31,000 tons. Outbound intermodal will increase from the west at 313,000 tons and from the east at 28,000 tons.

Southern Counties will see an increase in rail freight from a total of 933,000 tons in 2007 to 17.26 million tons in 2027, an increase of 0.18 percent.

- Inbound rail freight is all carload and will see an increase of 49,000 tons or 25.46 percent. Local inbound freight will increase 800 tons, from the west at 17,000 tons, the east at 14,000 tons, the north at 66,000 tons and from the south at 18,000 tons.
- Outbound rail freight is all carload and will see an overall decrease of 239,000 tons or 12.26 percent. Local freight will decrease by 45,000 tons, from the east at 188,000 tons and from the south at 181,000 tons.

Combined for all Counties will see an increase in rail freight from a total 13.27 million tons in 2007 to 13.41 million tons in 2027, an increase of 1.03 percent.

- Local freight will see a decrease of 49,000 tons, and from the west at 348,000 tons, and the south at 234,000 tons, There will be an increase in tonnage from the east at 430,000 tons and from the north at 662,000 tons.

Exhibit 11: 2007 and 2027 Rail Carload and Intermodal Summary

Rail Carload and Intermodal Tonnage		Local Traffic Circulates Between IPH Counties		Western Origins or Destinations		Eastern Origins or Destinations		Northern Origins or Destinations		Southern Origins or Destinations		Commodity Total
		Year	Data	Carload	Intermodal	Carload	Intermodal	Carload	Intermodal	Carload	Intermodal	
Northern IPH Counties	2007	Tonnage	70,960	63,160	510,910	22,440	138,236	10,520	23,280	190,360	23,280	190,360
	2027	Tonnage	27,185	57,340	613,742	28,323	480,950	9,960	19,080	141,889	19,080	141,889
Inbound		% vs 2007	(61.69%)	(9.21%)		26.22%	(5.32%)	(18.04%)	(25.46%)		(18.04%)	(25.46%)
Northern IPH Counties	2007	Tonnage	81,440	510,910	668,440	668,440	138,236	549,000	1,948,026	549,000	1,948,026	
	2027	Tonnage	36,377	613,742	480,950	480,950	209,557	368,529	1,709,155	368,529	1,709,155	
Outbound		% vs 2007	(55.33%)	20.13%	(28.05%)		51.59%	(32.87%)	(12.26%)		(32.87%)	(12.26%)
Northern IPH Counties	2007	Tonnage	152,400	574,070	690,880	690,880	148,756	572,280	2,138,386	572,280	2,138,386	
	2027	Tonnage	63,562	671,082	509,273	509,273	219,518	387,609	1,851,044	387,609	1,851,044	
Subtotal		% vs 2007	(58.29%)	16.90%	(26.29%)		47.57%	(32.27%)	(13.44%)		(32.27%)	(13.44%)
Central IPH Counties	2007	Tonnage	22,044	402,636	6,560	3,483,588	222,480	611,424	4,833,452	84,720	4,833,452	
	2027	Tonnage	16,666	366,001	8,291	4,231,483	282,968	808,568	5,795,030	81,053	5,795,030	
Inbound		% vs 2007	(24.40%)	(9.10%)	26.39%	21.47%	27.19%	(4.33%)	19.89%		(4.33%)	19.89%
Central IPH Counties	2007	Tonnage	12,780	4,315,693	185,680	645,052	120,040	5,600	5,466,685	181,840	5,466,685	
	2027	Tonnage	10,635	3,762,068	331,770	469,724	148,357	9,911	4,883,104	150,639	4,883,104	
Outbound		% vs 2007	(16.78%)	(12.83%)	78.66%	(27.18%)	23.59%	(17.16%)	(10.66%)		(17.16%)	(10.66%)
Central IPH Counties	2007	Tonnage	34,824	4,718,329	192,240	4,128,640	342,520	617,024	10,300,137	266,560	10,300,137	
	2027	Tonnage	27,301	4,128,068	340,061	4,701,207	431,325	818,479	10,678,134	231,692	10,678,134	
Subtotal		% vs 2007	(21.60%)	(12.51%)	76.89%	13.87%	25.93%	(13.08%)	3.67%		(13.08%)	3.67%
Southern IPH Counties	2007	Tonnage	5,016	94,440	143,168	143,168	166,560	28,040	437,224	28,040	437,224	
	2027	Tonnage	5,815	111,423	157,890	157,890	232,104	44,502	551,735	44,502	551,735	
Inbound		% vs 2007	15.93%	17.98%	10.28%	10.28%	39.35%	58.71%	26.19%		58.71%	26.19%
Southern IPH Counties	2007	Tonnage	3,800	77,672	298,320	298,320	234,180	116,720	496,512	116,720	496,512	
	2027	Tonnage	2,654	57,789	234,180	234,180	441,488	85,700	380,324	85,700	380,324	
Outbound		% vs 2007	(30.16%)	(25.60%)	(21.50%)		(26.58%)	(23.40%)		(26.58%)	(23.40%)	
Southern IPH Counties	2007	Tonnage	8,816	172,112	441,488	441,488	392,070	144,760	933,736	144,760	933,736	
	2027	Tonnage	8,469	169,213	392,070	392,070	232,104	130,203	932,059	130,203	932,059	
Subtotal		% vs 2007	(3.94%)	(1.68%)	(11.19%)		(1.06%)	(0.18%)		(1.06%)	(0.18%)	

Exhibit 11: Continued

Rail Carload and Intermodal Tonnage		Local Traffic: Circulates Between IPH Counties		Western Origins or Destinations		Eastern Origins or Destinations		Northern Origins or Destinations		Southern Origins or Destinations		Commodity Total
County	Year Data	Carload	Intermodal	Carload	Intermodal	Carload	Intermodal	Carload	Intermodal	Carload	Intermodal	
		Combined IPH Counties	2007 Tonnage	98,020	6,560	3,649,196	222,480	788,504	136,040	5,461,036		
Inbound *	2027 Tonnage	49,666	8,291	4,417,696	282,968	1,050,633	144,635	6,488,653				
	% vs 2007	(49.33%)	26.39%	21.06%	27.19%	33.24%	6.32%	18.82%				
Combined IPH Counties	2007 Tonnage	98,020	185,680	1,611,812	120,040	143,836	847,560	7,911,223				
Outbound *	2027 Tonnage	49,666	331,770	1,184,854	148,357	219,469	604,868	6,972,583				
	% vs 2007	(49.33%)	78.68%	(26.49%)	23.59%	52.58%	(28.63%)	(11.86%)				
Combined IPH Counties	2007 Tonnage	98,020	192,240	5,261,008	342,520	932,340	983,600	13,274,239				
Total *	2027 Tonnage	49,666	340,061	5,602,551	431,325	1,270,102	749,504	13,411,570				
	% vs 2007	(49.33%)	76.89%	6.49%	25.93%	36.23%	(23.80%)	1.03%				
Carload Totals	2007 Tonnage	98,020	5,464,511	5,261,008	932,340	983,600	12,739,479					
Carload Totals	2027 Tonnage	49,666	4,968,363	5,602,551	1,270,102	749,504	12,640,185					
	Change	(48,354)	(496,148)	341,543	337,762	(234,096)	(99,294)					
	% vs 2007	(49.33%)	(9.08%)	6.49%	36.23%	(23.80%)	(0.78%)					
Intermodal Totals	2007 Tonnage		192,240	342,520	431,325			534,760				
Intermodal Totals	2027 Tonnage		331,770	431,325				763,095				
	Change		139,530	88,805				228,335				
	% vs 2007		72.58%	25.93%				42.70%				
Carload + Intermodal	2007 Tonnage	98,020	5,656,751	5,603,528	932,340	983,600	13,274,239					
Carload + Intermodal	2027 Tonnage	49,666	5,300,133	6,033,876	1,270,102	749,504	13,403,279					
	Change	(48,354)	(356,618)	430,348	337,762	(234,096)	129,040					
	% vs 2007	(49.33%)	(6.30%)	7.68%	36.23%	(23.80%)	0.97%					

COUNTY CLUSTER FREIGHT FLOWS

Freight flows for each county are shown for 2007 and 2027 in paired tables. For each county cluster four tables are shown. Two tables are shown for inbound flows and two for outbound flows. In each set the upper table shows the county clusters combined directional tonnage. The second table shows each county's directional tonnage. In this lower table, counties are sorted in the left column in descending order based on commodity total tonnage for 2007. In the county table, the top row indicates columns for freight moving in five directions: Local, West, East, North and South as described above. Proportional break-outs are shown in the bottom rows and right-hand column.

The third set of tables shows the top 20 commodities shipped into or out of the county cluster. Commodities are sorted in descending order on commodity total tonnage for 2007 (third column from the left). The fourth column from the left shows the TRANSEARCH™ 2027 forecast growth rate (positive or negative) for the commodity. The resulting forecast tonnage for 2027 is shown in the fifth column. Two tables are shown side by side to allow for easy comparison of inbound and outbound commodity movements that can be used for economic development assessment. Generally, the data positive or negative growth rate indicates which industrial sectors may be expanding or contracting.

Two commodity groups that appear often have vague definitions that require clarity: "Secondary Freight" and "Nonmetallic Minerals." Secondary freight is composed of mixed commodities. Primary freight is composed from a single commodity group shipped from its original origin to a destination. Secondary freight can be composed of single or multiple commodities that can be shipped one or multiple times between production facilities, a production facility to a distribution center (DC), or a DC to a retail outlet; and they can be shipped in single or multiple vehicles. Secondary freight is a good indicator of the growth in the movement of distribution activity within the region and the amount trans-loading, warehousing, and value added inventory handling. It is also an indicator of goods consumption and utilization of parts and components used for value-added commercial activities.

Nonmetallic minerals according to the Washington State University Strategic Freight Transportation Analysis Report 21 are "sand, gravel and aggregates used in the construction of highways and buildings that comprise approximately 96 percent of minerals mined". The report also notes that the mining of these minerals usually occurs close to the point of consumption and are not transported over long distances. "High transportation cost of construction materials, such as sand and gravel or crushed stone, is the largest component in determining the cost of materials in highway construction, which makes the proximity of the mine to the construction site a strong economic issue."

It must also be noted that the commodity movement section for the southern counties of the study area are essentially presented twice. Because the southern counties include significant water movements, that skew comparisons of the other modes in the central

and northern counties, the data is first presented without water movements. In the second series of tables, commodities moving by water are included.

The TRANSEARCH™ dataset contains forecasts for 2012, 2017 and 2027. For brevity, the tables in the body of the technical memo show only the growth rate of 2027 over 2007. Tables for freight flow forecasts for 2012 are in Appendix B and the freight flow forecasts for 2017 are in Appendix C.

NORTHERN COUNTIES INBOUND FREIGHT FLOWS

Inbound freight to the Northern Counties totaled 4.4 million tons in 2007 and is forecast to grow to 5.7 million tons in 2027, an increase of 1.4 million tons or 31.4 percent (Exhibit 12).

To assist in identifying tonnage statistics in the tables, the first two tables will have numbered circles, such as ① to assist in orienting where data correlates between the text and tables.

A summary of the forecast for 2027 indicates:

- local truck freight in 2007 was at 1.3 million tons ① and is forecast to grow 14.6 percent ② by 2027 to 1.5 million tons ③
- inbound directional truck freight was at 2.8 million tons ④ and is forecast to grow 43 percent to just over 4 million tons in 2027
- overall inbound rail freight was at 190,000 tons and is forecast to decrease 25.5 percent to 142,000 tons.

Exhibit 12: 2007 and 2027 Northern Counties Inbound Tonnage

Northern Counties Inbound Tonnage		2007	2027	Growth	% Growth
Local Freight					
Truck Only	Tonnage & Growth Rate	① 1,328,884	③ 1,522,784	193,900	② 14.6%
Rail Only	Tonnage & Growth Rate	70,960	27,185	(43,775)	(61.7%)
Truck + Rail	Tonnage & Growth Rate	1,399,844	1,549,969	150,125	10.7%
⑤ Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	④ 2,836,679	4,061,018	1,224,339	43.2%
Rail Only	Tonnage & Growth Rate	119,400	114,704	(4,696)	(3.9%)
Truck + Rail	Tonnage & Growth Rate	2,956,079	4,175,722	1,219,643	41.3%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	4,165,563	5,583,802	1,418,239	34.0%
Rail Only	Tonnage & Growth Rate	190,360	141,889	(48,471)	(25.5%)
Truck + Rail	Tonnage & Growth Rate	4,355,923	5,725,691	1,369,768	31.4%

Detailed inbound analysis by county (Exhibit 13) indicates:

- Stevens County represents approximately 41.2 percent ⑨ by share of the 2007 total tonnage

- Bonner County has the second largest 2007 share at 39.2 percent of the total
- Boundary County is at 9.1 percent
- Pend Oreille County is at 6.0 percent
- Ferry County is at 4.5 percent

The TRANSEARCH™ forecast indicates inbound tonnage to:

- Stevens County will increase by 675,000 tons or 37.6 percent
- Bonner County will increase by 380,000 tons or 22.5 percent
- Boundary County will increase by 90,000 tons or 23.2 percent
- Pend Oreille County will increase by 95,000 tons or 36.5 percent
- Ferry County will increase by 125,000 tons or 63.6 percent

Inbound analysis *by direction* indicates that in 2007 (in Exhibit 13, second row from bottom, "2007 Truck + Rail Freight"):

- local freight represented a 32.1 percent ⑥ by share of the total tonnage for the Northern Counties
- inbound freight from the West represented 40.4 percent (next column to right)
- inbound freight from the East represented 7.5 percent
- inbound freight from the North (proxy for Canada) represented 4.0 percent
- inbound freight from the South represented 15.9 percent ⑦

TRANSEARCH™ forecasts slight shifts in share for 2027 (the difference between bottom row - 2027, and second row from bottom - 2007):

- local inbound truck and rail freight decreasing 5 percent
- inbound from the West increasing 0.6 percent
- inbound from the East increasing 0.6 percent
- inbound from the North increasing 0.5 percent
- inbound from the South increasing by 3.4 percent, going up to 19.3 percent ⑧

Inbound analysis *by mode* indicates that local truck freight will represent 30.5 percent in 2007 and rail freight will represent 1.6 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck decreasing to 26.6 percent and rail decreasing to 0.5 percent.

For directional inbound tonnage in 2007, truck represented 65.1 percent of the total tonnage and rail 2.7 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck rising to a 70.9 percent share and rail decreasing to only 2.0 percent.

Inbound truck tonnage with significant increases will occur in Stevens County from the West ⑩, in Bonner County from the South, and in Boundary County from the South. Inbound truck tonnage will not have any significant decreases arriving from any direction. There will not be any significant increases or decreases in inbound rail tonnage arriving from any direction.

Exhibit 13: 2007 and 2027 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 %
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%
	2027 Tonnage	438,577		1,821,564		63,213		90,788		57,531		2,471,673	43.2%
	% vs 2007	38.8%		35.7%		33.4%		57.7%		72.2%		37.6%	9
Bonner County, ID	2007 Tonnage	786,041	70,960	81,130		201,858		22,087		543,801		1,705,977	39.2%
	2027 Tonnage	815,629	27,185	71,386		285,792		30,245		858,673		2,086,910	36.5%
	% vs 2007	3.8%	(61.7%)	(12.0%)		41.6%		36.9%		57.9%		22.5%	
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%
	2027 Tonnage	173,577		9,649	56,083	46,981	24,374	7,349	7,239	144,330	19,080	488,663	8.5%
	% vs 2007	8.9%		3.5%	(9.7%)	40.3%	42.4%	35.0%	(9.1%)	83.9%	(18.0%)	23.2%	
Pend Oreille County, WA	2007 Tonnage	43,866		145,126		17,456	5,320	37,829	2,560	9,857		262,014	6.0%
	2027 Tonnage	55,608		184,100		35,292	3,949	57,163	2,721	18,697		357,531	6.2%
	% vs 2007	26.8%		26.9%		102.2%	(25.8%)	51.1%	6.3%	89.7%		36.5%	
Ferry County, WA	2007 Tonnage	23,730		119,879	1,080	5,109		41,145		3,935		194,878	4.5%
	2027 Tonnage	39,393		200,675	1,257	6,447		62,728		8,414		318,915	5.6%
	% vs 2007	66.0%		67.4%	16.4%	26.2%		52.5%		113.9%		63.6%	
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%
	2027 Tonnage	1,522,784	27,185	2,287,373	57,340	437,724	28,323	248,274	9,960	1,087,646	19,080	5,725,691	100.0%
	% vs 2007	14.6%	(61.7%)	34.7%	(9.2%)	43.4%	26.2%	51.3%	(5.3%)	62.5%	(18.0%)	31.4%	

2007 Truck Freight	2007 Tons %	30.5%											
2007 Rail Freight	2007 Tons %		1.6%				65.1%						
2027 Truck Freight	2027 Tons %	26.6%					2.7%						
2027 Rail Freight	2027 Tons %		0.5%				70.9%						
2007 Truck + Rail	2007 Tons %	5	32.1%	40.4%	7.5%	7.5%		4.0%	6	15.9%	8	100.0%	
2027 Truck + Rail	2027 Tons %		27.1%	41.0%	8.1%	8.1%		4.5%		19.3%		100.0%	

NORTHERN COUNTIES OUTBOUND FREIGHT FLOWS

Outbound freight from the Northern Counties totaled 11.9 million tons in 2007 and is forecast to decrease slightly to 11.5 million tons in 2027, a reduction of 362,000 tons or 3.0 percent (**Exhibit 14**).

A summary of the forecast for 2027 indicates:

- local truck freight in 2007 was at 4.3 million tons and is forecast to decrease 10.2 percent by 2027 to 3.9 million tons
- outbound directional truck freight was at 5.6 million tons and is forecast to increase 5.6 percent to 5.9 million tons
- outbound directional rail freight was at 1.87 million tons and is forecast to decrease 10.4 percent to 1.67 million tons

Exhibit 14: 2007 and 2027 Northern Counties Outbound Tonnage

Northern Counties Outbound Tonnage		2007	2027	Growth	% Growth
Local freight					
Truck Only	Tonnage & Growth Rate	4,341,656	3,900,678	(440,978)	(10.2%)
Rail Only	Tonnage & Growth Rate	81,440	36,377	(45,063)	(55.3%)
Truck + Rail	Tonnage & Growth Rate	4,423,096	3,937,054	(486,042)	(11.0%)
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	5,612,369	5,929,279	316,910	5.6%
Rail Only	Tonnage & Growth Rate	1,866,586	1,672,778	(193,808)	(10.4%)
Truck + Rail	Tonnage & Growth Rate	7,478,955	7,602,057	123,102	1.6%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	9,954,025	9,829,957	(124,069)	(1.2%)
Rail Only	Tonnage & Growth Rate	1,948,026	1,709,155	(238,871)	(12.3%)
Truck + Rail	Tonnage & Growth Rate	11,902,051	11,539,111	(362,940)	(3.0%)

Detailed outbound analysis *by county* (**Exhibit 15**) indicates:

- Bonner County represents approximately 42.5 percent of the 2007 total tonnage
- Stevens County has the second largest 2007 share with 28.8 percent of the total
- Boundary County is at 17.9 percent
- Pend Oreille County is at 6.9 percent
- Ferry County is at 3.9 percent.

The TRANSEARCH™ forecast indicates that inbound tonnage to:

- Bonner County will decrease by 460,000 tons or 9.1 percent
- Stevens County will decrease by 665,000 tons or 19.4 percent
- Boundary County will decrease by 560,000 tons or 26.3 percent
- Ferry County will increase by 1.5 million tons or over 300 percent
- Pend Oreille County will decrease by 195,000 tons or 23.5 percent

Outbound analysis *by direction* indicates that in 2007:

- local freight represented a 37.2 percent by share of the total outbound tonnage for the Northern Counties
- outbound freight to the West represented 25.9 percent
- outbound freight to the East represented 14.4 percent
- outbound freight to the North (proxy for Canada) represented 2.9 percent
- outbound freight from the South represented 19.7 percent

TRANSEARCH™ forecasts slight shifts for 2027:

- local outbound freight decreasing by 3.1 percent
- Western outbound freight increasing by 7.1 percent
- Eastern outbound freight increasing by 1.2 percent
- North outbound freight increasing by 1.3 percent
- South outbound freight decreasing by 6.6 percent

Outbound analysis *by mode* indicates local truck freight share was at 36.5 percent in 2007 and rail share was at 0.7 percent. TRANSEARCH™ forecasts for 2027 truck share to be 33.8 percent and rail share will be at 0.3 percent.

For directional outbound tonnage in 2007 truck share was 47.2 percent and rail share was at 15.7 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck rising to 51.4 percent and rail decreasing to only 14.5 percent.

Outbound truck tonnage with significant increases will occur in Bonner County to the west, in Stevens County to the north and in Ferry County to the west, east and south.

Outbound truck tonnage with significant decreases will occur in Bonner County to the south, in Stevens County to the west and in Boundary County to the south.

Outbound rail tonnage with significant increases will occur in Stevens County to the west and Boundary County to the north.

Outbound rail tonnage with significant decreases will occur in Bonner County to the west, east and south, in Stevens County to the east and South, in Boundary County to the east and south and in Pend Oreille County to the east and south.

Exhibit 15: 2007 and 2027 Northern Counties Outbound Distribution

County	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 %
	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%	
	2027	Tonnage	2,983,420	28,205	159,295	3,958	761,944	141,142	13,486	434,467	68,103	4,594,020	39.8%	
		% vs 2007	(4.6%)	(57.8%)	6.9%	(65.3%)	35.4%	(28.1%)	34.7%	(47.0%)	(39.7%)	(9.1%)		
Stevens County, WA	2007	Tonnage	698,031		1,581,893	299,728	167,845	213,120	170,156	206,870	16,000	3,428,758	28.8%	
	2027	Tonnage	538,959		986,345	403,105	141,891	152,792	231,585	198,091	12,913	2,762,491	23.9%	
		% vs 2007	(22.8%)		(37.6%)	34.5%	(15.5%)	(28.3%)	36.1%	(4.2%)	(19.3%)	(19.4%)		
Boundary County, ID	2007	Tonnage	218,713	14,560	51,739	199,782	266,729	231,560	5,559	702,336	377,680	2,131,778	17.9%	
	2027	Tonnage	103,046	8,172	57,449	206,678	271,710	167,422	7,338	383,075	253,194	1,570,832	13.6%	
		% vs 2007	(52.9%)	(43.9%)	11.0%	3.5%	1.9%	(27.7%)	32.0%	(45.5%)	(33.0%)	(26.3%)		
Pend Oreille County, WA	2007	Tonnage	266,919		421,193		21,810	27,400	11,221	33,126	42,360	824,030	6.9%	
	2027	Tonnage	115,291		398,126		17,283	19,595	14,141	31,639	34,319	630,393	5.5%	
		% vs 2007	(56.8%)		(5.5%)		(20.8%)	(28.5%)	26.0%	(4.5%)	(19.0%)	(23.5%)		
Ferry County, WA	2007	Tonnage	32,213		363,535		23,849		6,850	36,304		462,750	3.9%	
	2027	Tonnage	159,962		1,591,512		123,677		7,921	98,303		1,981,375	17.2%	
		% vs 2007	396.6%		337.8%		418.6%		15.6%	170.8%		328.2%		
County Summary	2007	Tonnage	4,341,656	81,440	2,567,343	510,910	1,042,857	668,440	203,798	1,798,370	549,000	11,902,051	100.0%	
	2027	Tonnage	3,900,678	36,377	3,192,727	613,742	1,316,506	480,950	274,471	1,145,575	368,529	11,539,111	100.0%	
		% vs 2007	(10.2%)	(55.3%)	24.4%	20.1%	26.2%	(28.0%)	34.7%	(36.3%)	(32.9%)	(3.0%)		

2007 Truck Freight	2007 Tons %	36.5%	47.2%										
2007 Rail Freight	2007 Tons %	0.7%	15.7%										100.0%
2027 Truck Freight	2027 Tons %	33.8%	51.4%										
2027 Rail Freight	2027 Tons %	0.3%	14.5%										100.0%
2007 Truck + Rail	2007 Tons %	37.2%	14.4%	25.9%	2.9%					19.7%			100.0%
2027 Truck + Rail	2027 Tons %	34.1%	15.6%	33.0%	4.2%					13.1%			100.0%

COMMODITIES THAT MOVE INTO AND OUT-OF THE NORTHERN COUNTIES

The pie charts below depict the top ten inbound and outbound commodities by percentage of the tonnage shipped. The next ten to twenty commodities shipped typically equal few percentage points more or less. For clarity, these smaller commodities have been omitted from the pie charts to minimize the number of categories shown but are detailed in the following tables. In each pie chart set to help visualize proportional changes the left pie chart shows 2007's distribution while the right pie chart shows 2027's distribution. For example, in (Exhibit 16) it is easy to recognize that inbound secondary freight increases from 48.2 percent in 2007 to 60.9 percent in 2027, and the shifting share of lumber or wood products that decreases from 21.7 percent in 2007 to 8.4 percent in 2027.

Inbound commodity share (Exhibit 16): The top four commodities represent over 86 percent of total in bound freight for 2007.

- secondary freight inbound shipments in 2007 represented 2 million tons or 48.2 percent of the total tonnage and is forecast to reach 60.1 percent in 2027
- lumber, nonmetallic minerals, as well as clay, concrete, glass or stone products comprise the remaining three in the group of large inbound commodities.

Outbound commodity share (Exhibit 17): The top three commodities represent 94 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.

- lumber products represented 51.5 percent of the outbound tonnage in 2007 and will decrease in share to 45 percent by 2027
- minerals represented 38.9 percent and will increase in share 41 percent by 2027
- farm products represented approximately 2.6 percent and will increase slightly.

Exhibit 16: 2007 and 2027 Northern Counties Top Ten Inbound Commodities

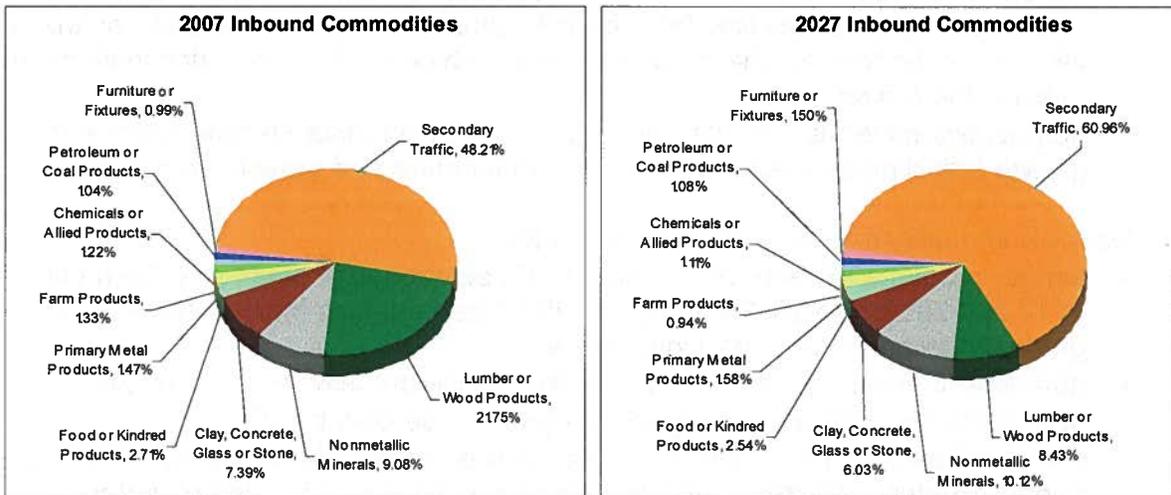
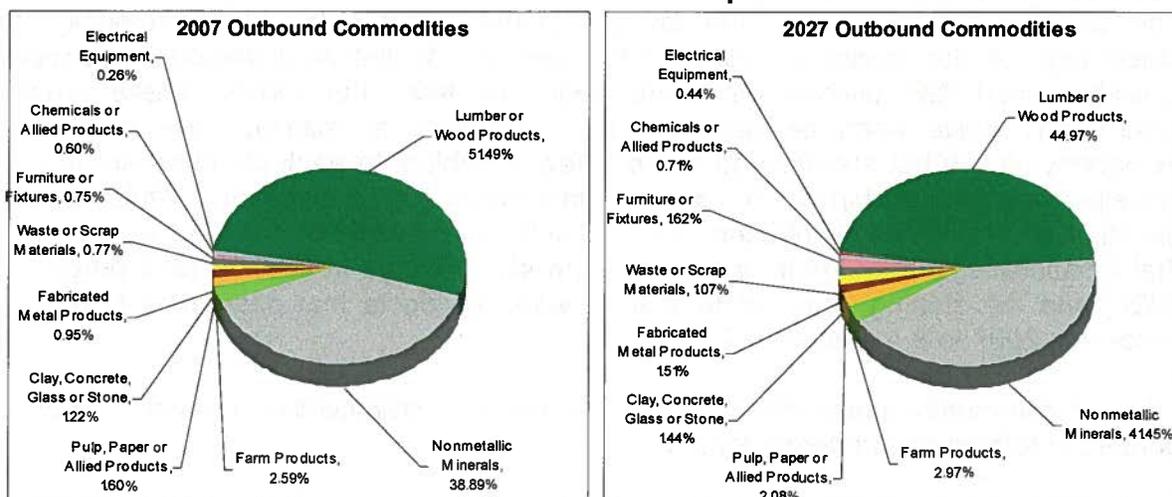


Exhibit 17: 2007 and 2027 Northern Counties Top Ten Outbound Commodities



The pie charts can be cross referenced with **Exhibit 18** 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 (Exhibit 19): The table and chart shows the forecasted growth from the base year of 2007 and each of study periods. This tool enables a quick visualization of not only the long term growth but also what happens during the intermediate years as a result of the 2008-2009 recession.

- for example, in 2007 the largest inbound commodity was secondary freight and clearly the charts indicate tonnage will increase in each forecast period, with 66.7 percent by 2027; indicating more local consumption of consumer type products
- lumber and wood products show a decrease in each forecast period which indicates a gradual decline for inbound demand for this commodity or that its distribution pattern is changing with direct shipment to other destinations by-passing the region
- nonmetallic minerals and clay products indicate an initial decline succeeded by growth reflecting a recessionary down-turn for sand and gravel in construction.

Outbound commodity forecast growth (Exhibit 20):

- lumber products experience a large initial decrease with small positive growth in 2012 and 2017, and 2027 tonnage is still 15 percent less than 2007's indicating a gradual decline in this commodity sector
- nonmetallic minerals experience an initial decline but fully recovers by 2027
- farm products are forecast to gradually grow 11 percent by 2027
- commodities that result from manufacturing or value added processes, such as paper, furniture, electrical and transportation equipment, printed material, and others shown in the table all forecast growth, reflecting a gradual change in the economy toward activities that are not mainly dependent on natural resources.

Exhibit 18: 2007 and 2027 Northern Counties Commodities Forecast Changes

Northern Counties Inbound Top 20 Commodities				Northern Counties Outbound Top 20 Commodities			
2007 %	2007 Tons	Growth % ▲	2027 Tons	2007 %	2007 Tons	Growth % ▲	2027 Tons
48.21%	2,099,804	66.21%	3,490,178	51.49%	6,128,070	(15.33%)	5,188,677
21.75%	947,405	(49.07%)	482,507	38.89%	4,628,855	3.32%	4,782,552
9.08%	395,413	46.52%	579,351	2.59%	308,288	11.00%	342,189
7.39%	321,711	7.34%	345,313	1.60%	189,859	26.26%	239,714
2.71%	118,222	23.01%	145,429	1.22%	145,315	14.29%	166,078
1.47%	64,021	41.25%	90,432	0.95%	113,431	53.85%	174,508
1.33%	57,765	(6.46%)	54,035	0.77%	91,154	35.68%	123,677
1.22%	52,984	19.71%	63,426	0.75%	89,048	110.14%	187,129
1.04%	45,151	36.84%	61,784	0.60%	71,049	15.15%	81,815
0.99%	42,978	99.77%	85,859	0.26%	30,788	65.63%	50,992
0.98%	42,641	18.63%	50,587	0.19%	22,932	18.10%	27,084
0.63%	27,403	28.00%	35,077	0.15%	17,861	321.92%	75,361
0.59%	25,847	86.26%	48,143	0.15%	17,561	(35.46%)	11,334
0.49%	21,314	54.63%	32,959	0.12%	14,682	104.79%	30,067
0.47%	20,557	64.47%	33,809	0.09%	11,184	84.33%	20,615
0.44%	19,017	42.95%	27,184	0.07%	7,946	41.93%	11,278
0.39%	17,201	46.55%	25,208	0.03%	3,165	223.86%	10,250
0.24%	10,290	56.73%	16,128	0.03%	2,986	44.89%	4,326
0.20%	8,850	143.51%	21,551	0.02%	2,902	(38.38%)	1,788
0.17%	7,288	241.61%	24,896	0.02%	2,188	147.80%	5,423

Exhibit 19: 2007, 2012, 2017 and 2027 Northern Counties Inbound Commodity Growth

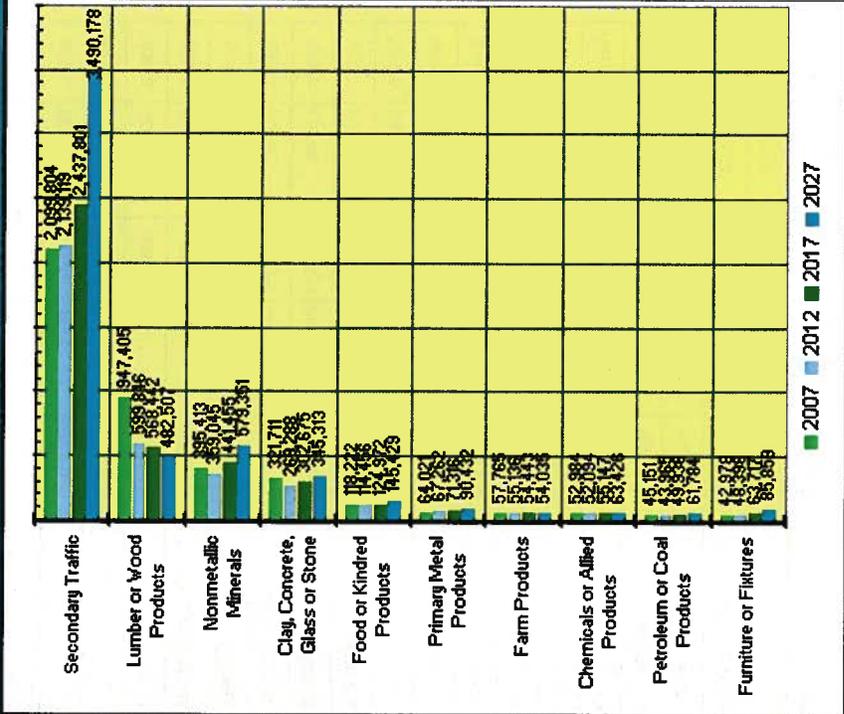
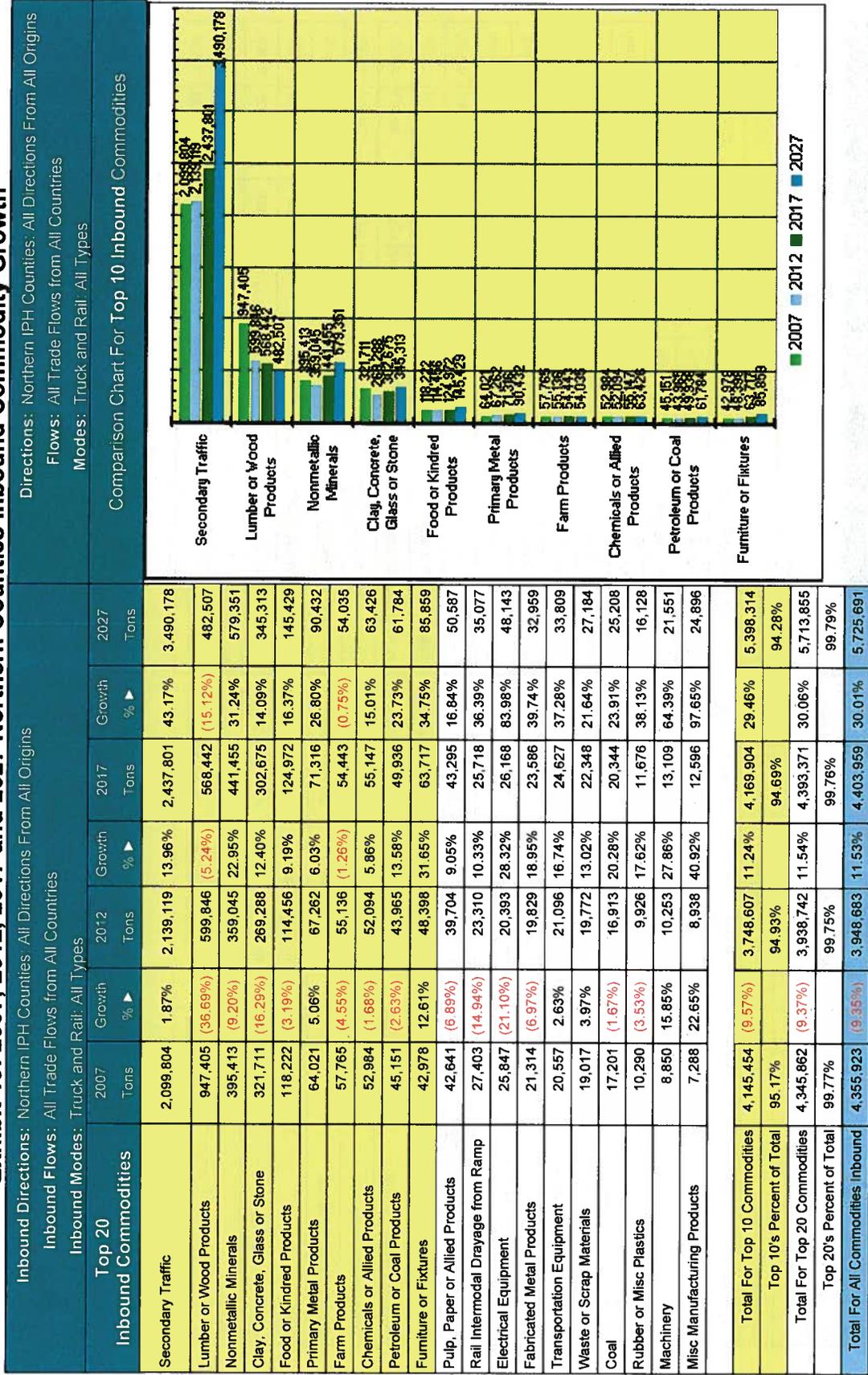
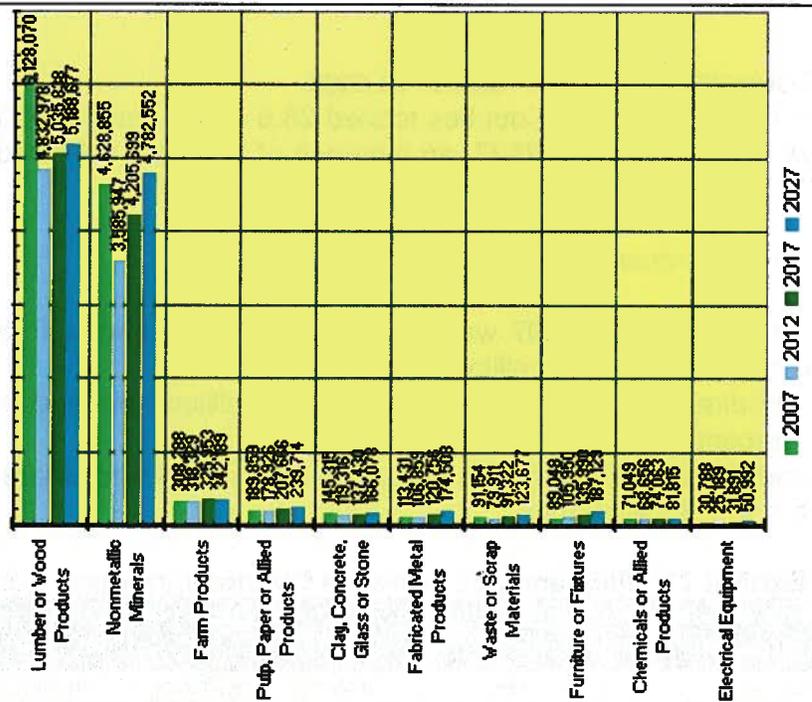


Exhibit 20: 2007, 2012, 2017 and 2027 Northern Counties Outbound Commodity Growth

Outbound Directions: Northern Counties: All Directions to All Destinations Outbound Flows: All Trade Flows to All Countries Outbound Modes: Truck and Rail: All Types		Comparison Chart For Top 10 Outbound Commodities					
Top 20 Outbound Commodities	2007 Tons	Growth % ▶	2012 Tons	Growth % ▶	2017 Tons	Growth % ▶	2027 Tons
Lumber or Wood Products	6,128,070	(21.13%)	4,832,978	4.20%	5,035,838	3.04%	5,188,677
Nonmetallic Minerals	4,628,855	(22.53%)	3,585,947	17.28%	4,205,699	13.72%	4,782,552
Farm Products	308,288	3.26%	318,329	2.40%	325,953	4.98%	342,189
Pulp, Paper or Allied Products	189,859	(5.76%)	176,926	16.06%	207,666	15.43%	239,714
Clay, Concrete, Glass or Stone	145,315	(17.89%)	119,316	15.18%	137,430	20.85%	166,078
Fabricated Metal Products	113,431	(5.79%)	106,859	13.00%	120,756	44.51%	174,508
Waste or Scrap Materials	91,154	(12.33%)	79,911	14.28%	91,322	35.43%	123,677
Furniture or Fixtures	89,048	18.98%	105,950	28.35%	135,990	37.60%	187,129
Chemicals or Allied Products	71,049	(3.37%)	68,656	7.87%	74,063	10.47%	81,815
Electrical Equipment	30,788	(18.19%)	25,189	26.61%	31,891	59.89%	50,992
Food or Kindred Products	22,932	6.44%	24,409	3.89%	25,358	6.80%	27,084
Secondary Traffic	17,861	26.70%	22,630	51.55%	34,296	119.74%	75,361
Primary Metal Products	17,561	(30.11%)	12,273	(25.91%)	9,093	24.64%	11,334
Transportation Equipment	14,682	17.72%	17,284	23.08%	21,274	41.33%	30,067
Rail Intermodal Drayage to Ramp	11,184	2.01%	11,409	18.23%	13,488	52.84%	20,615
Rubber or Misc. Plastics	7,946	(4.96%)	7,552	14.67%	8,660	30.24%	11,278
Apparel or Related Products	3,165	52.36%	4,822	32.01%	6,366	61.01%	10,250
Fresh Fish or Marine Products	2,986	(1.28%)	2,947	15.44%	3,402	27.14%	4,326
Metallic Ores	2,902	(36.78%)	1,835	(0.62%)	1,823	(1.93%)	1,788
Printed Matter	2,188	34.74%	2,949	23.98%	3,656	48.34%	5,423
Total For Top 10 Commodities	11,795,855	(20.12%)	9,422,060	10.02%	10,366,608	9.36%	11,337,332
Top 10's Percent of Total	99.11%		98.84%		98.76%		98.25%
Total For Top 20 Commodities	11,899,263	(19.91%)	9,530,169	10.11%	10,494,024	9.92%	11,534,857
Top 20's Percent of Total	99.98%		99.97%		99.97%		99.96%
Total For All Commodities Outbound	11,902,051	(19.91%)	9,532,900	10.12%	10,497,240	9.93%	11,539,111



CENTRAL COUNTIES INBOUND FREIGHT FLOWS

Inbound freight to the Central Counties totaled 26.6 million tons in 2007 and is forecast to grow to 30.6 million tons in 2027, an increase of almost 4 million tons or 15 percent (Exhibit 21).

A summary of the forecast for 2027 indicates:

- local truck freight in 2007 was at 8.86 million tons and is forecast to grow 1.1 percent by 2027 to 8.96 million tons
- inbound directional truck freight was at 12.9 million tons and is forecast to grow 22.7 percent to 15.8 million tons
- inbound directional rail freight was at 4.8 million tons and is forecast to grow 20.1 percent to 5.8 million tons.

Exhibit 21: 2007 and 2027 Central Counties Inbound Tonnage

Central Counties Inbound Tonnage		2007	2027	Growth	% Growth
Local freight					
Truck Only	Tonnage & Growth Rate	8,868,718	8,963,653	94,935	1.1%
Rail Only	Tonnage & Growth Rate	22,044	16,666	(5,378)	(24.4%)
Truck + Rail	Tonnage & Growth Rate	8,890,762	8,980,319	89,558	1.0%
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	12,897,378	15,823,040	2,925,662	22.7%
Rail Only	Tonnage & Growth Rate	4,811,408	5,778,364	966,956	20.1%
Truck + Rail	Tonnage & Growth Rate	17,708,786	21,601,403	3,892,617	22.0%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	21,766,096	24,786,693	3,020,597	13.9%
Rail Only	Tonnage & Growth Rate	4,833,452	5,795,030	961,578	19.9%
Truck + Rail	Tonnage & Growth Rate	26,599,548	30,581,723	3,982,175	15.0%

Detailed inbound analysis *by county* (Exhibit 22) indicates:

- Spokane County represents 79.8 percent by share of the 2007 total tonnage
- Kootenai County has the second largest 2007 share at 10.9 percent of the total
- Adams County is at 4 percent
- Lincoln County is at 3.9 percent
- Shoshone County is at 1.4 percent.

The TRANSEARCH™ forecast indicates the inbound tonnage to:

- Spokane County will increase by 1.96 million tons or 9.2 percent
- Kootenai County will increase by 630,000 tons or 21.4 percent
- Lincoln County will increase by 1.1 million tons or 100.3 percent
- Shoshone County will increase by 355,000 tons or 96.2 percent
- Adams County will decrease by less than 0.9 percent.

Inbound analysis *by direction* indicates that in 2007:

- local freight represented a 33.3 percent by share of the total tonnage for the Central Counties
- inbound freight from the West represented 38.6 percent
- inbound freight from the East represented 19.5 percent
- inbound freight from the North (proxy for Canada) represented 3.3 percent
- inbound freight from the South represented 5.1 percent.

TRANSEARCH™ forecasts slight shifts in share for 2027:

- local inbound freight will decrease by 4 percent
- inbound arriving from the West will remain level
- Inbound arriving from the East will increase by 2 percent
- Inbound arriving from the North will increase by 0.7 percent
- Inbound freight arriving from the South will increase by 1.4 percent.

Inbound analysis *by mode* indicates that local truck freight will be at 33.3 percent in 2007 and rail freight will be at 0.1 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck decreasing to 29.3 percent and rail remaining approximately level.

For directional inbound tonnage in 2007 truck represented 48.5 percent of the total tonnage and rail represented 18.1 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck rising to a 51.7 percent share and rail increasing to 18.9 percent.

Inbound truck tonnage will increase in Spokane County from all directions, in Kootenai County from the east, north and south, in Lincoln County from the west, east and south, and in Shoshone County from the east and south.

Inbound truck tonnage will not have any significant decreases from any direction.

Inbound rail tonnage will increase in Spokane County from the east and north, in Kootenai County from the north, and in Adams County from the north.

Inbound rail tonnage will decrease in Spokane County from the west, and Adams County from the east.

Exhibit 22: 2007 and 2027 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 %
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%
	2027 Tonnage	6,181,871	15,081	9,403,139	368,982	1,193,223	4,346,682	231,915	628,816	749,244	64,693	23,183,647	75.8%
	% vs 2007	(7.8%)	(16.6%)	11.9%	(8.2%)	23.9%	24.3%	55.9%	26.2%	42.6%	7.4%	9.2%	
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%
	2027 Tonnage	1,318,403	1,585	571,619	684	513,376	50,715	74,381	56,272	929,097	14,477	3,530,609	11.5%
	% vs 2007	6.8%	(60.0%)	8.9%	(79.1%)	35.4%	(13.0%)	65.9%	53.7%	53.7%	(23.2%)	21.4%	
Lincoln County, WA	2007 Tonnage	469,949		392,457		68,301	3,920	33,350	3,160	78,913		1,050,050	3.9%
	2027 Tonnage	852,020		855,087		184,549	6,151	49,077	4,923	151,325		2,103,131	6.9%
	% vs 2007	81.3%		117.9%		170.2%	56.9%	47.2%	55.8%	91.8%		100.3%	
Adams County, WA	2007 Tonnage	244,572		503,432	4,000	16,908	145,604	34,905	73,400	22,646	5,840	1,051,107	4.0%
	2027 Tonnage	186,105		511,505	4,625	29,819	110,904	51,730	118,558	26,872	1,882	1,042,000	3.4%
	% vs 2007	(23.9%)		1.6%	15.6%	76.4%	(23.8%)	48.2%	61.5%	18.7%	(66.6%)	(0.9%)	
Shoshone County, ID	2007 Tonnage	216,000		33,097		62,467		4,843		51,826		368,233	1.4%
	2027 Tonnage	425,253		46,140		145,149		6,532		99,261		722,336	2.4%
	% vs 2007	96.9%		39.4%		132.4%		34.9%		91.5%		96.2%	
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%
	2027 Tonnage	8,963,653	16,666	11,387,489	374,291	2,066,116	4,514,451	413,635	808,568	1,955,799	81,053	30,581,723	100.0%
	% vs 2007	1.1%	(24.4%)	15.5%	(8.5%)	38.7%	21.8%	55.1%	32.2%	52.4%	(4.3%)	15.0%	

2007 Truck Freight	2007 Tons %	33.3%						48.5%					
2007 Rail Freight	2007 Tons %		0.1%					18.1%				100.0%	
2027 Truck Freight	2027 Tons %	29.3%						51.7%				100.0%	
2027 Rail Freight	2027 Tons %		0.1%					18.9%				100.0%	
2007 Truck + Rail	2007 Tons %	33.4%		38.6%		19.5%		3.3%		5.1%		100.0%	
2027 Truck + Rail	2027 Tons %	29.4%		38.5%		21.5%		4.0%		6.7%		100.0%	

CENTRAL COUNTIES OUTBOUND FREIGHT FLOWS

Outbound freight from the Central Counties totaled 26.8 million tons in 2007 and is forecast to increase slightly to 27.3 million tons in 2027, an increase of 484,000 tons or 1.8 percent (**Exhibit 23**).

A summary of the forecast for 2027 indicates:

- local truck freight in 2007 was at 4.5 million tons and is forecast to increase by only 0.5 percent by 2027
- directional truck freight was at 16.9 million tons and is forecast to increase 6.2 percent to 17.9 million tons by 2027
- directional rail freight was at 5.4 million tons and is forecast to decrease 10.7 percent to 4.9 million tons by 2027.

Exhibit 23: 2007 and 2027 Central Counties Outbound Tonnage

Central Counties Outbound Tonnage		2007	2027	Growth	% Growth
Local freight					
Truck Only	Tonnage & Growth Rate	4,525,735	4,548,687	22,952	0.5%
Rail Only	Tonnage & Growth Rate	12,780	10,635	(2,145)	(16.8%)
Truck + Rail	Tonnage & Growth Rate	4,538,515	4,559,322	20,807	0.5%
Directional Freight (to West, East, North or South)					
Truck Only	Tonnage & Growth Rate	16,865,944	17,910,819	1,044,875	6.2%
Rail Only	Tonnage & Growth Rate	5,453,905	4,872,469	(581,436)	(10.7%)
Truck + Rail	Tonnage & Growth Rate	22,319,849	22,783,288	463,439	2.1%
Combined Local and Directional Freight					
Truck Only	Tonnage & Growth Rate	21,391,678	22,459,506	1,067,828	5.0%
Rail Only	Tonnage & Growth Rate	5,466,685	4,883,104	(583,581)	(10.7%)
Truck + Rail	Tonnage & Growth Rate	26,858,363	27,342,610	484,246	1.8%

Outbound analysis *by county* indicates:

- Spokane County represents 57.5 percent of the 2007 total outbound tonnage
- Kootenai County is second with 21.5 percent of the total
- Adams County is at 9.8 percent
- Lincoln County at 9.8 percent
- Shoshone County is at 1.3 percent.

The 2027 TRANSEARCH™ forecast indicates outbound tonnage from:

- Spokane County will increase by 650,000 tons or 3.9 percent
- Kootenai County will increase by 815,000 tons or 13.2 percent
- Lincoln County will increase by 730,000 tons or 44.7 percent
- Adams County will decrease by 1.26 million tons or 44.7 percent
- Shoshone County will decrease by 140,000 tons or 37 percent.

The detailed outbound analysis *by direction* (**Exhibit 24**) indicates that in 2007:

- local freight represented 15.2 percent of the total tonnage for the Central Counties
- outbound freight to the Western states represented 53.8 percent of the total
- outbound freight to the Eastern states represented 10.7 percent
- outbound freight to the Southern states represented 1.9 percent
- outbound freight to the North or Canada was only 18.9 percent

TRANSEARCH™ forecasts minor shifts in share for 2027 with local freight remaining basically the same, outbound to the West decreasing 2.7 percent, eastbound freight gaining 1.3 percent, northbound freight going up 1.2 percent and freight destined to the South up 0.4 percent.

Outbound analysis *by mode* indicates that the local freight mix in 2007 and 2027 will remain about the same: truck will have approximately 15 percent and rail with less than 0.1 percent.

For directional outbound tonnage in 2007, trucks represented 62.4 percent and rail represented 22.3 percent. TRANSEARCH™ forecasts that by 2027 the mix will shift slightly with truck representing 66.3 percent, and rail decreasing to 18.7 percent.

Outbound truck tonnage will increase in Spokane County to the east and north, in Kootenai County in all directions, and in Lincoln County to the north.

Outbound truck tonnage will decrease in Spokane County to the west, in Adams County to the west and south and in Lincoln County to the west and south.

Outbound rail tonnage will increase only in Spokane County to the west.

Outbound rail tonnage decreases will occur in Adams County to the west and east, and Lincoln County to the west.

Exhibit 24: 2007 and 2027 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 %
		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	57.5%
	2027	Tonnage	1,838,175	4,712	8,483,340	3,710,901	1,205,337	348,898	483,356	9,911	1,001,460	76,088	62.4%
		% vs 2007	9.9%	4.8%	(4.1%)	12.4%	20.0%	(6.9%)	68.1%	77.0%	6.1%	3.9%	
Kootenai County, ID	2007	Tonnage	2,291,415		664,034	6,600	863,336	242,400	59,181		1,967,748	82,800	21.5%
	2027	Tonnage	2,088,825		820,660	11,488	1,216,161	184,666	105,519		2,508,693	57,649	25.4%
		% vs 2007	(8.8%)		23.6%	74.1%	40.9%	(23.8%)	78.3%		27.5%	13.2%	
Adams County, WA	2007	Tonnage	175,293	880	297,272	1,011,116	57,175	147,760	87,522		1,044,816	3,960	9.8%
	2027	Tonnage	76,531	1,243	220,922	285,935	39,889	84,517	121,807		728,487	4,579	5.7%
		% vs 2007	(56.3%)	41.3%	(25.7%)	(71.7%)	(30.2%)	(42.8%)	39.2%		(30.3%)	15.6%	
Lincoln County, WA	2007	Tonnage	175,293	880	297,272	1,011,116	57,175	147,760	87,522		1,044,816	3,960	9.8%
	2027	Tonnage	76,531	1,243	220,922	285,935	39,889	84,517	121,807		728,487	4,579	5.7%
		% vs 2007	(56.3%)	41.3%	(25.7%)	(71.7%)	(30.2%)	(42.8%)	39.2%		(30.3%)	15.6%	
Shoshone County, ID	2007	Tonnage	58,416		17,176		189,996		8,303		108,830		1.3%
	2027	Tonnage	52,450		18,978		97,091		13,980		58,716		0.9%
		% vs 2007	(10.2%)		10.5%		(48.9%)		68.4%		(46.0%)		
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	100.0%
	2027	Tonnage	4,132,512	7,198	9,764,822	4,294,058	2,598,367	702,597	846,469	9,911	5,025,844	142,895	100.0%
		% vs 2007	(5.5%)	15.1%	(3.5%)	(19.4%)	19.6%	(23.0%)	59.7%	77.0%	(1.6%)	(4.2%)	

2007 Truck Freight	2007	Tons %	15.2%										
2007 Rail Freight	2007	Tons %	0.0%					62.4%					
2027 Truck Freight	2027	Tons %	15.0%					22.3%					
2027 Rail Freight	2027	Tons %	0.0%					66.3%					
2007 Truck + Rail	2007	Tons %	15.2%					18.7%					
2027 Truck + Rail	2027	Tons %	15.0%					10.7%					
									1.9%				18.4%
										3.1%			18.8%

COMMODITIES THAT MOVE INTO AND OUT-OF THE CENTRAL COUNTIES

The pie charts below depict the top ten inbound and outbound commodities by percentage of the tonnage shipped. In each pie chart set to help visualize proportional changes the left pie chart shows 2007's distribution while the right pie chart shows 2027's distribution.

Inbound commodity share (Exhibit 25): The top three commodities represent approximately 48 percent of all inbound commodities. Distribution activities around secondary freight, farm and food products, lumber, coal, and a variety of mineral products comprise the existing base industries in the Central Counties.

Inbound commodity flows in 2007 were focused on primary commodities such as:

- nonmetallic minerals at 22.2 percent
- lumber and wood at 13.6 percent
- secondary traffic at 12 percent
- coal at 9.5 percent
- food products at 6.6 percent
- clay and like products at 6.1 percent
- petroleum and chemicals combine for 11.2 percent.

Outbound commodity share (Exhibit 26): The top four commodities represent 63 percent of the total outbound freight. The pie charts easily depict the significance of secondary freight and farm products in outbound tonnage for the Central Counties as they comprise approximately half of the tonnage.

- secondary freight was the top outbound commodity with 26.5 percent (while it was third for inbound with 12 percent). This high percentage for outbound and inbound reflects the commercial activities in and around Spokane and Coeur d'Alene. Much of the secondary freight circulates within the IPH study area, and there is an increasing amount that is destined to all markets out of the IPH study area. This reflects the increasing manufacturing and value added commercial activities in the area and the distribution of mixed shipments that will be transported via truck
- farm products represents 15.2 percent of the total tonnage share in 2007
- lumber and wood products share was at 11.7 percent of the total tonnage
- Coal shows as both an inbound and outbound commodity in the tables. Coal freight is interchanged between the two Class I railroads. In the TRANSEARCH™ rail waybill records after one railroad brings coal into the IPH study area, the other railroad takes it out, creating two transport records. Realistically coal should be considered as a single through-freight shipment, but it is not tabulated as such in the database. Coal's tonnage was retained in both the inbound and outbound summaries to maintain the rail waybill dataset integrity. The TRANSEARCH™ rail waybill records were also analyzed for other commodities that experienced the matching interchange effect, but none were identified.

Exhibit 25: 2007 and 2027 Central Counties Top Ten Inbound Commodities

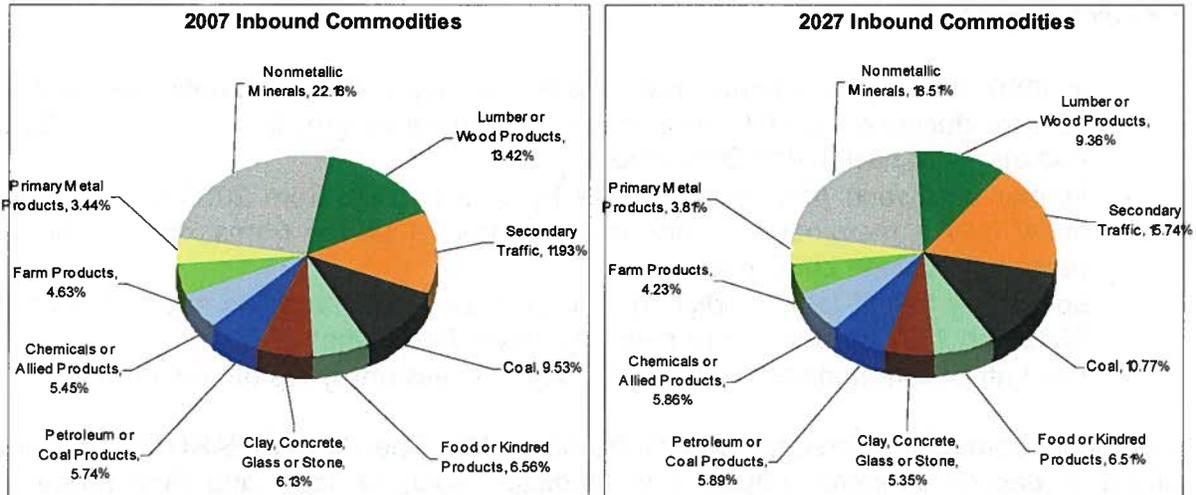
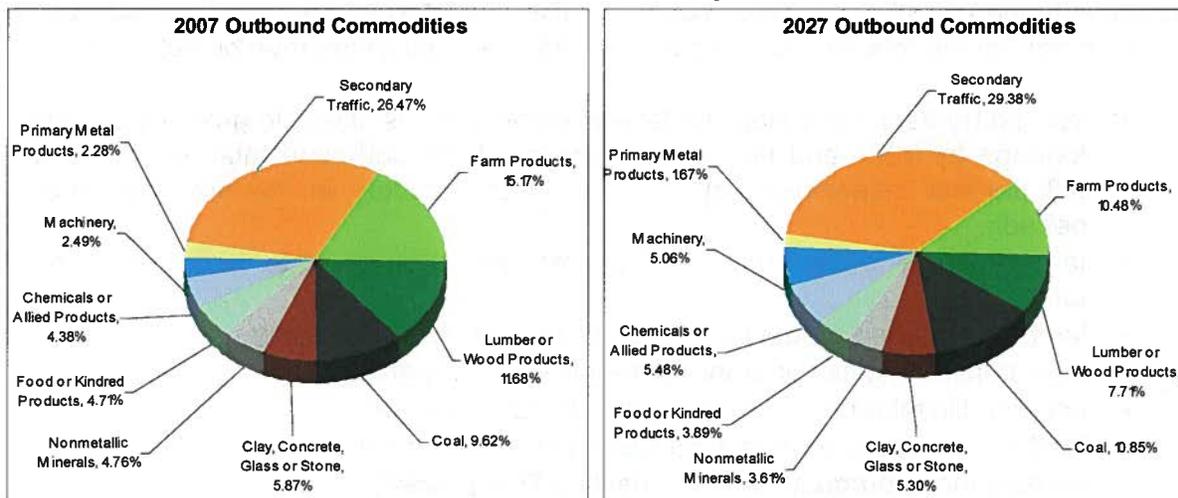


Exhibit 26: 2007 and 2027 Central Counties Top Ten Outbound Commodities



The pie charts can be cross referenced with **Exhibit 27** 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 in each table indicates the forecast growth percentage for the commodities by 2027.

For 2027, TRANSEARCH™ forecasts most inbound commodities will experience growth with the exception of the two largest inbound commodities of nonmetallic minerals which is forecast to decline 4.1 percent and lumber or wood products which is forecast to decline 19.8 percent.

Inbound commodity forecast growth (Exhibit 28): The table and chart shows the forecasted growth from the base year of 2007. The 2007 top ten commodities for this region account for 89 percent of the total (two yellow rows at bottom of table). By 2027,

the top ten will decrease to 87.6 percent of the total, indicating a diversification of the inbound freight flows.

- in 2007 the largest inbound commodity was nonmetallic minerals, with a 27.7 percent decrease in 2012 and returning to positive growth in 2017 and 2027 (although not back to the 2007 level)
- lumber and wood products decrease by 23.2 percent from 2007 to 2012, and show only a marginal recovery in each forecast period (remaining around 20 percent below the 2007 level)
- secondary freight takes a slight dip in 2012 over 2007 and has strong growth in 2012 and 2027 finishing more than 50 percent higher than 2007
- most other commodities experience a slight recessionary dip but then grow.

Outbound commodity forecast growth (Exhibit 29): The TRANSEARCH™ forecast shows a decline in some outbound commodities such as farm and food products, lumber and wood, and nonmetallic minerals which may indicate a shift away from the area's more traditional resource-based industries to more of an urbanized and manufacturing mix of commercial activities. The 2007 top ten commodities account for 87.4 percent of the total and will decrease to 83.4 percent of the total by 2027.

- secondary freight is visibly the largest commodity, is slated to grow 13 percent by tonnage by 2027 and reach 29.8 percent of the outbound total, experiencing a 6.8 percent recessionary dip in 2012 with recovery in the next two forecast periods.
- farm products to decline by 29.7 percent and drop down to 10.6 percent of the total
- lumber and wood products tonnage to decline by 32.8 percent
- clay, concrete, glass or stone tonnage decline 8 percent
- nonmetallic minerals tonnage decline by 22.7 percent
- food and kindred products tonnage decline 16 percent
- primary metal products tonnage decline 25.5 percent

Exhibit 27: 2007 and 2027 Central Countries Commodities Forecast Changes

Central Countries Inbound Top 20 Commodities				Central Countries Outbound Top 20 Commodities			
2007 %	2007 Tons	Growth % ▶	2027 %	2007 %	2007 Tons	Growth % ▶	2027 %
22.2	5,898,736	(4.1)	18.7	26.5	7,109,401	13.0	29.8
13.4	3,570,781	(19.8)	9.5	15.2	4,075,401	(29.7)	10.6
12.0	3,173,717	51.6	15.9	11.7	3,136,953	(32.8)	7.8
9.6	2,534,905	30.0	10.9	9.6	2,583,149	14.8	11.0
6.6	1,744,637	14.1	6.6	5.9	1,575,272	(8.0)	5.4
6.1	1,630,992	0.4	5.4	4.8	1,277,532	(22.7)	3.7
5.8	1,526,093	18.1	6.0	4.8	1,265,232	(16.0)	3.9
5.5	1,450,293	23.5	5.9	4.4	1,175,388	27.5	5.6
4.7	1,231,331	5.1	4.3	2.5	669,599	106.6	5.1
3.5	915,278	27.3	3.9	2.3	611,628	(25.5)	1.7
1.5	407,078	86.3	2.5	2.1	567,492	14.1	2.4
1.3	349,519	20.2	1.4	1.7	439,877	76.3	2.9
1.2	311,778	8.1	1.1	1.4	358,834	(1.1)	1.3
1.0	272,237	28.0	1.2	1.3	346,946	17.4	1.5
1.0	259,496	87.1	1.6	1.2	316,925	5.0	1.2
0.8	211,332	84.3	1.3	1.2	316,179	28.0	1.5
0.7	192,885	83.0	1.2	1.2	312,885	68.3	2.0
0.6	145,185	35.6	0.7	0.7	196,923	69.2	1.2
0.5	135,760	31.3	0.6	0.4	101,407	84.2	0.7
0.4	105,101	53.2	0.5	0.4	99,631	50.6	0.6

Exhibit 28: 2007, 2012, 2017 and 2027 Central Counties Inbound Commodity Growth

Inbound Directions: Central IPH Counties: All Directions From All Origins Inbound Flows: All Trade Flows from All Countries Inbound Modes: Truck and Rail: All Types				Directions: Central IPH Counties: All Directions From All Origins Flows: All Trade Flows from All Countries Modes: Truck and Rail: All Types			
Top 20 Inbound Commodities				Comparison Chart For Top 10 Inbound Commodities			
	2007 Tons	Growth % ▶	2012 Tons	Growth % ▶	2017 Tons	Growth % ▶	2027 Tons
Nonmetallic Minerals	5,898,736	(27.68%)	4,266,149	13.54%	4,843,591	16.85%	5,659,641
Lumber or Wood Products	3,570,781	(23.18%)	2,743,025	0.93%	2,768,578	3.44%	2,863,744
Secondary Traffic	3,173,717	(5.34%)	3,004,344	13.51%	3,410,334	41.12%	4,812,571
Coal	2,534,905	4.53%	2,649,806	11.52%	2,955,010	11.51%	3,295,122
Food or Kindred Products	1,744,637	(4.99%)	1,657,600	6.46%	1,764,623	12.81%	1,990,608
Clay, Concrete, Glass or Stone	1,630,992	(14.88%)	1,388,339	8.09%	1,500,634	9.11%	1,637,401
Petroleum or Coal Products	1,526,093	(5.57%)	1,441,142	9.81%	1,582,573	13.85%	1,801,815
Chemicals or Allied Products	1,450,293	(5.23%)	1,374,437	10.74%	1,522,002	17.65%	1,790,616
Farm Products	1,231,331	(0.97%)	1,219,366	1.46%	1,237,190	4.60%	1,294,110
Primary Metal Products	915,278	(5.27%)	867,031	12.22%	972,999	19.79%	1,165,577
Transportation Equipment	407,078	18.25%	481,362	16.40%	560,287	35.34%	758,288
Fabricated Metal Products	349,519	(11.17%)	310,494	9.38%	339,623	23.68%	420,030
Pulp, Paper or Allied Products	311,778	(9.34%)	282,650	7.29%	303,267	11.13%	337,034
Rail Intermodal Drayage from Ramp	272,237	(14.93%)	231,563	10.33%	255,510	36.39%	348,502
Electrical Equipment	259,496	(4.76%)	247,152	19.58%	295,541	64.25%	485,418
Rail Intermodal Drayage to Ramp	211,332	2.01%	215,584	18.23%	254,878	52.84%	389,558
Machinery	192,885	(3.57%)	185,998	22.35%	227,568	55.07%	352,891
Rubber or Misc Plastics	145,185	(4.07%)	139,273	10.08%	153,311	28.38%	196,815
Misc Mixed Shipments	135,760	(15.92%)	114,147	11.68%	127,474	39.81%	178,216
Waste or Scrap Materials	105,101	15.16%	121,034	10.81%	134,118	20.09%	161,058
Total For Top 10 Commodities	23,676,765	(12.95%)	20,611,239	9.44%	22,557,533	16.64%	26,311,204
Top 10's Percent of Total	89.01%		88.00%		87.68%		86.04%
Total For Top 20 Commodities	26,067,134	(11.99%)	22,940,516	9.89%	25,209,110	18.76%	29,939,014
Top 20's Percent of Total	98.00%		97.94%		97.99%		97.90%
Total For All Commodities Inbound	26,599,548	(11.95%)	23,422,143	9.84%	25,726,547	18.87%	30,581,723

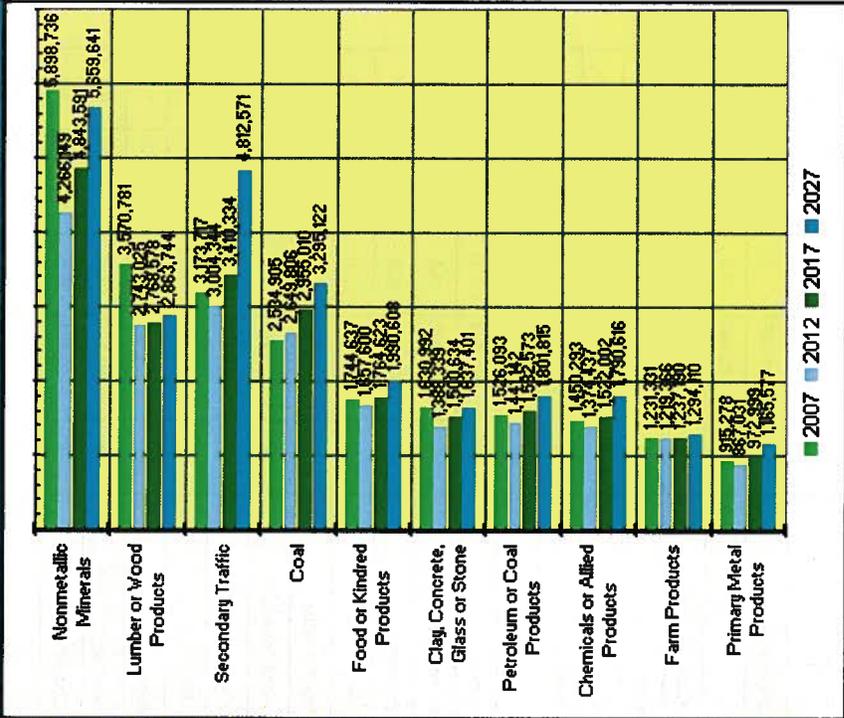
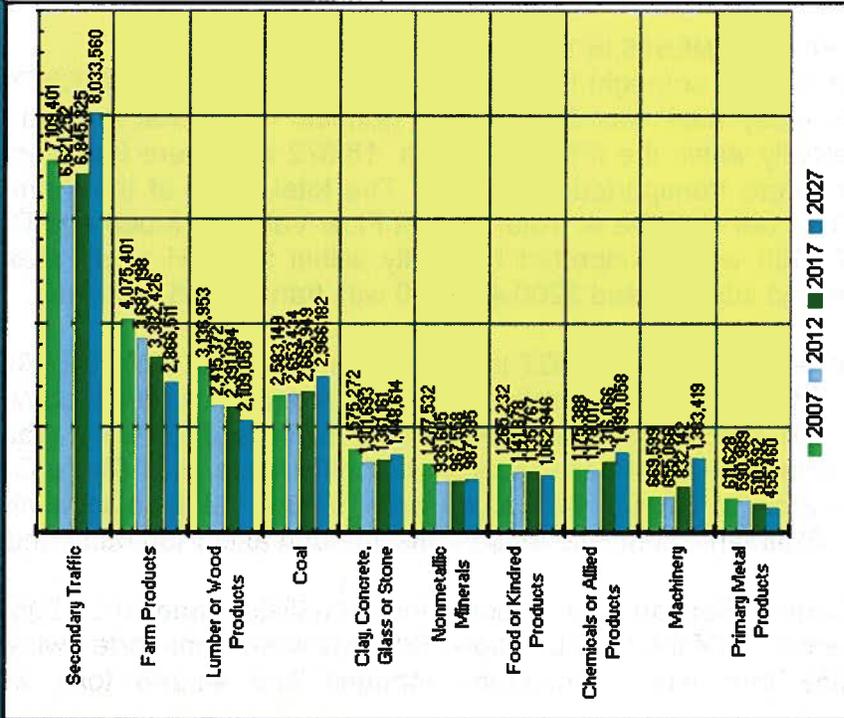


Exhibit 29: 2007, 2012, 2017 and 2027 Central Counties Outbound Commodity Growth

Outbound Directions: Central IPH Counties: All Directions to All Destinations Outbound Flows: All Trade Flows to All Countries Outbound Modes: Truck and Rail: All Types		Directions: Central IPH Counties: All Directions to All Destinations Flows: All Trade Flows to All Countries Modes: Truck and Rail: All Types					
Top 20 Outbound Commodities	2007 Tons	Growth % ▶	2012 Tons	Growth % ▶	2017 Tons	Growth % ▶	2027 Tons
Secondary Traffic	7,109,401	(6.87%)	6,621,252	3.38%	6,845,325	17.36%	8,033,560
Farm Products	4,075,401	(9.53%)	3,687,198	(9.62%)	3,332,426	(13.98%)	2,866,511
Lumber or Wood Products	3,136,953	(23.00%)	2,415,372	(1.01%)	2,391,094	(11.80%)	2,109,058
Coal	2,583,149	2.72%	2,653,434	0.47%	2,665,949	11.28%	2,966,182
Clay, Concrete, Glass or Stone	1,575,272	(17.37%)	1,301,693	4.57%	1,361,161	6.42%	1,448,614
Nonmetallic Minerals	1,277,532	(26.69%)	936,605	3.30%	967,558	2.05%	987,395
Food or Kindred Products	1,265,232	(9.75%)	1,141,878	(0.54%)	1,135,767	(6.41%)	1,062,946
Chemicals or Allied Products	1,175,388	0.22%	1,178,017	11.72%	1,316,066	13.90%	1,499,058
Machinery	669,599	(2.17%)	655,066	27.03%	832,142	66.25%	1,383,419
Primary Metal Products	611,628	(3.37%)	590,989	(13.60%)	510,592	(10.80%)	455,460
Fabricated Metal Products	567,492	(8.64%)	518,474	5.98%	549,556	17.78%	647,294
Transportation Equipment	439,877	14.60%	504,105	14.41%	576,722	34.50%	775,666
Electrical Equipment	358,834	(34.96%)	233,399	7.45%	250,791	41.49%	354,842
Petroleum or Coal Products	346,946	(9.78%)	313,018	17.02%	366,309	11.17%	407,209
Pulp, Paper or Allied Products	316,925	(11.11%)	281,716	7.77%	303,596	9.61%	332,785
Rail Intermodal Drayage from Ramp	316,179	(14.94%)	268,945	10.33%	296,727	36.39%	404,697
Waste or Scrap Materials	312,885	1.49%	317,556	15.89%	368,007	43.11%	526,645
Furniture or Fixtures	196,923	0.70%	198,293	23.66%	245,217	35.87%	333,169
Rail Intermodal Drayage to Ramp	101,407	1.99%	103,421	18.24%	122,285	52.72%	186,749
Rubber or Misc Plastics	99,631	(1.15%)	98,481	16.77%	114,998	30.49%	150,057
Total For Top 10 Commodities	23,479,654	(9.79%)	21,181,505	0.83%	21,358,081	6.81%	22,812,202
Top 10's Percent of Total	87.42%		87.14%		85.88%		83.43%
Total For Top 20 Commodities	26,536,652	(9.49%)	24,018,912	2.22%	24,552,288	9.69%	26,931,317
Top 20's Percent of Total	98.80%		98.81%		98.72%		98.50%
Total For All Commodities Outbound	26,858,363	(9.49%)	24,308,190	2.31%	24,870,310	9.94%	27,342,610



AIR FREIGHT MOVEMENTS IN THE CENTRAL COUNTIES

The total amount of airfreight tonnage reported in the TRANSEARCH™ database 2007 for the IPH study area was 63,248 tons (Exhibit 1). Of that amount, 128 tons were moved internally within the IPH study area, 18,872 tons were transported inbound and 44,249 tons were transported outbound. The total value of the airfreight transported was \$374,125,144 (Exhibit 4: Total Freight Flow Value by Mode and Direction). Of that amount \$74,638 was transported internally within the IPH study area, \$173,636,666 was transported inbound and \$200,413,840 was transported outbound.

Airfreight forecast growth for 2027 is 27.8 for tonnage and TRANSEARCH™ shows the majority of airfreight involved Spokane County. A minor amount of commercial airfreight (less than 0.01 percent) was handled by Nez Perce and Whitman Counties. This was basically comprised of mail or miscellaneous shipments. Nez Perce County handled a total of 23 tons of internal IPH study area freight, 13 tons inbound and 105 tons outbound. Whitman County handled 6 tons inbound and 1 ton outbound.

Spokane County (Spokane International Airport (GEG)) handled 63,205 tons of the total or 99.99 percent. Of the total tonnage, 128 tons were transported within the IPH study area, 18,852 tons were transported inbound and 44,248 tons were transported outbound.

Inbound commodity forecast growth for airfreight (Exhibit 30): Inbound airfreight is forecast to grow by 17.4 percent by 2027 to reach a total of 22,580 tons.

- mail or contract traffic is the largest commodity handled, the table shows it will decline in each of the forecast periods ending 24.8 percent below 2007
- miscellaneous mixed shipments is the second largest commodity handled and after a recessionary dip in 2012, it returns to growth in 2017 and 2027
- machinery is the third largest commodity handled and it experiences double digit growth in each of the forecast periods, ending 112 percent above 2007
- most other inbound commodities experience growth during the study period except for chemicals, printed matter, farm products, and apparel and related products which all decline by 2027.

Outbound commodity forecast growth for airfreight (Exhibit 31): Outbound airfreight is forecast to grow by 27.8 percent by 2027 to reach a total of 56,570 tons.

- mail or contract traffic is the largest commodity handled, the table shows it also declines 31.2 percent during the study period down to 12,534 tons
- pulp, paper or allied product are the second largest commodity handled and show continual growth during the study period ending 72 percent higher in 2027
- machinery is the third largest commodity handled and it experiences growth in each of the forecast periods, ending 97 percent above 2007
- most other outbound commodities experience growth during the study period except for apparel and related products which declines 75 percent.

Exhibit 30: Airfreight Flows Into the Central Counties

Inbound Directions: Spokane County, WA; West, East, North and South		Spokane County, WA; West, East, North and South		
Inbound Flows: All Trade Flows from All Countries		Flows: From All Origins		
Inbound Modes: Air; All Types		Modes: Air; All Types		
Top 20 Inbound Commodities		Comparison Chart For Top 10 Inbound Commodities		
	2007 Tons	2012 Tons	2017 Tons	2027 Tons
	Growth %	Growth %	Growth %	
Mail or Contract Traffic	5,429	4,498	4,320	4,093
	(17.15%)	(3.97%)	(5.24%)	
Misc Mixed Shipments	3,306	2,889	3,017	4,152
	(12.63%)	4.45%	37.61%	
Machinery	2,720	3,019	3,780	5,757
	10.98%	25.21%	52.32%	
Chemicals or Allied Products	1,809	1,502	1,536	1,479
	(16.96%)	2.25%	(3.73%)	
Transportation Equipment	1,187	1,495	1,709	2,279
	25.94%	14.30%	33.36%	
Printed Matter	977	852	849	862
	(12.78%)	(0.30%)	1.57%	
Electrical Equipment	759	664	764	965
	(12.58%)	15.10%	26.30%	
Farm Products	519	497	431	324
	(4.20%)	(13.20%)	(24.92%)	
Apparel or Related Products	360	270	213	150
	(25.05%)	(21.15%)	(29.37%)	
Pulp, Paper or Allied Products	339	301	320	363
	(11.10%)	6.42%	13.44%	
Instrument, Photo Equip, Optical Eq	338	427	530	800
	26.31%	24.34%	50.87%	
Rubber or Misc Plastics	269	259	288	391
	(3.85%)	11.30%	35.50%	
Food or Kindred Products	236	239	245	256
	0.93%	2.49%	4.84%	
Fresh Fish or Marine Products	221	219	225	238
	(1.03%)	2.73%	5.82%	
Fabricated Metal Products	204	188	207	251
	(7.77%)	10.18%	21.30%	
Misc Manufacturing Products	74	80	96	139
	7.64%	20.60%	44.35%	
Clay, Concrete, Glass or Stone	28	20	20	17
	(28.51%)	(2.01%)	(12.60%)	
Textile Mill Products	25	28	31	31
	11.46%	9.98%	0.20%	
Primary Metal Products	18	9	7	5
	(51.36%)	(16.69%)	(29.52%)	
Leather or Leather Products	17	16	14	11
	(3.21%)	(15.67%)	(19.29%)	
Total For Top 10 Commodities	17,403	15,985	16,938	20,424
Top 10's Percent of Total	92.31%	91.42%	90.98%	90.45%
Total For Top 20 Commodities	18,834	17,469	18,601	22,564
Top 20's Percent of Total	99.91%	99.91%	99.91%	99.93%
Total For All Commodities Inbound	18,852	17,485	18,617	22,580
		7.25%	6.48%	21.28%

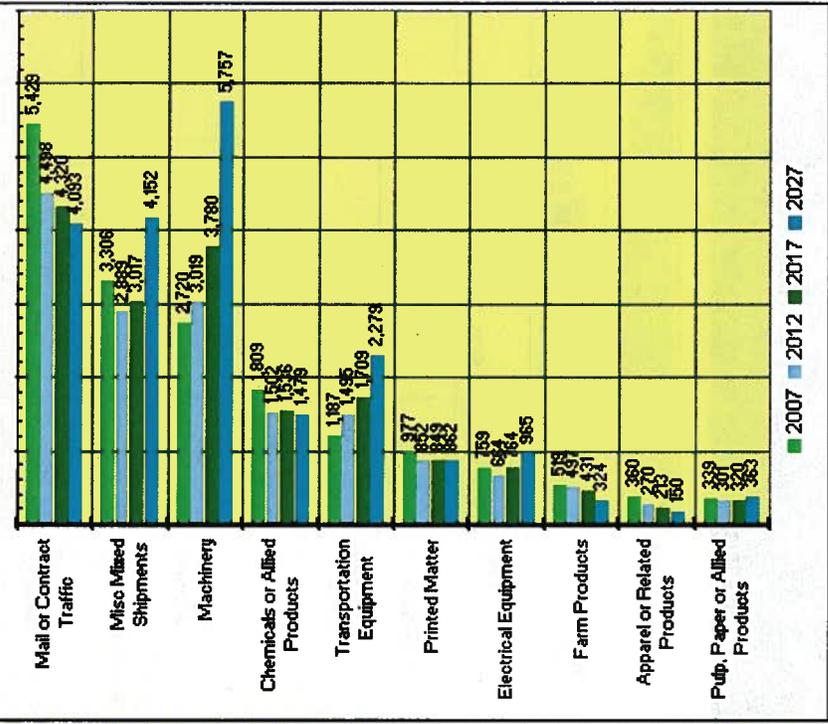
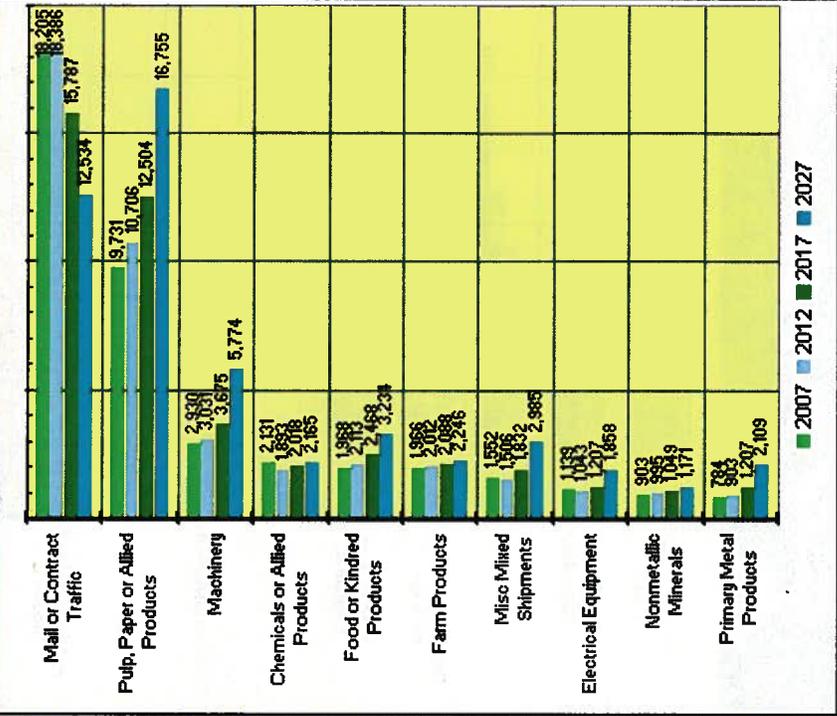
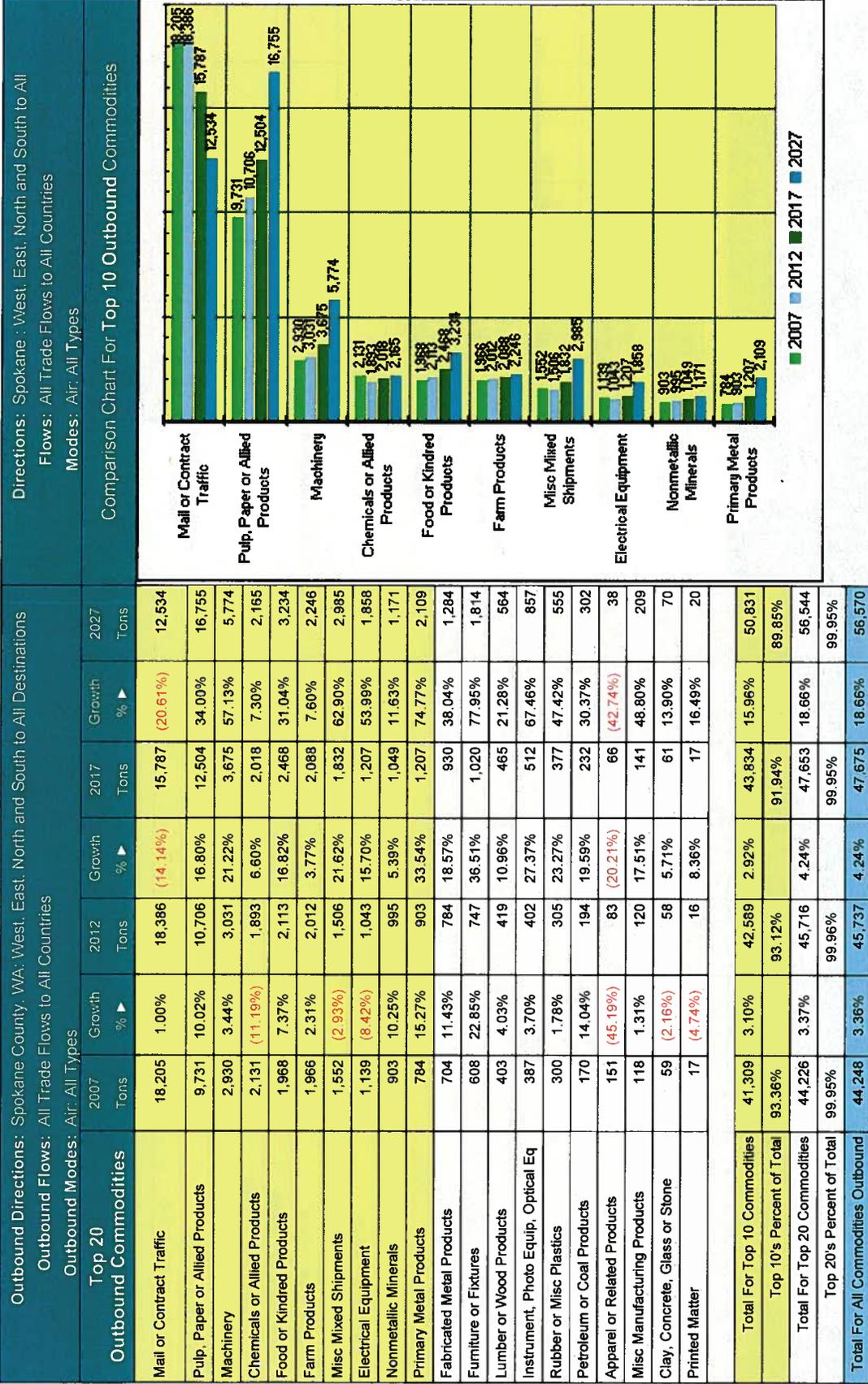


Exhibit 31: Airfreight Flows Out of the Central Counties



SOUTHERN COUNTIES INBOUND FREIGHT FLOWS

Inbound freight to the Southern Counties totaled 6.9 million tons in 2007 and is forecast to grow to 9.8 million tons in 2027, an increase of 2.9 million tons or 42.2 percent (Exhibit 32).

A summary of the forecast for 2027 indicates:

- Local truck freight in 2007 was at 3.5 million tons and is forecast to increase by 37.2 percent by 2027 to 4.8 million tons.
- Inbound directional truck freight was at 2.9 million tons and is forecast to increase by 50.6 percent to 4.4 tons.
- Inbound directional rail freight was at 432,000 tons and is forecast to increase by 26.3 percent to 546,000 tons.

Exhibit 32: 2007 and 2027 Southern Counties Inbound Tonnage

Southern Counties Inbound Tonnage		2007	2027	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%

Detailed inbound analysis *by county* (Exhibit 33) indicates:

- Nez Perce County represents approximately 32.4 percent of the 2007 total tonnage
- Whitman County has the second largest 2007 share at 20.4 percent
- Asotin County transports 13.7 percent
- Latah County transports 13.2 percent
- Benewah County transports 7.7 percent
- Clearwater County transports 7.1 percent
- Garfield County transports 2 percent
- Lewis County transports 1.8 percent
- Columbia County transports 1.6 percent.

The TRANSEARCH™ forecast indicates that inbound tonnage to:

- Nez Perce County will increase by 570,000 tons or 25.5 percent
- Whitman County will increase by 590,000 tons or 41.9 percent
- Asotin County will increase by 690,000 tons or 72.9 percent
- Latah County will increase by 410,000 tons or 44.6 percent
- Clearwater County will increase by 280,000 tons or 56.8 percent
- Benewah County will increase by 130,000 or 24 percent
- Garfield County will increase by 90,000 tons or 68.1 percent
- Lewis County will increase by 100,000 tons or 78.9 percent
- Columbia County will increase by almost 60,000 tons or 50.7 percent

Inbound analysis *by direction* indicates that in 2007:

- local freight represented 51.2 percent of the total tonnage for the Southern Counties
- inbound freight from the west represented 16.9 percent.
- inbound freight from the east represented 11 percent
- inbound freight from the north (proxy for Canada) represented 5.2 percent
- inbound freight from the south represented 15.7 percent

TRANSEARCH™ forecasts slight shifts in share for 2027:

- local inbound freight decreasing 1.8 percent
- inbound from the west decreasing 1.4 percent
- inbound from the east remaining level
- inbound from the north remaining level
- inbound from the south increasing by 3 percent

Inbound analysis *by mode* indicates that for local freight truck will be at 51.2 percent in 2007 and rail freight will be at 0.1 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck decreasing to 49.4 percent and rail remaining approximately level.

For directional inbound tonnage in 2007 for truck represented 42.5 percent of the total tonnage and rail represented 6.3 percent. TRANSEARCH™ forecasts for 2027 the mix will shift with truck rising to a 45 percent share and rail decreasing to 5.6 percent.

Inbound truck tonnage will have significant increases in Nez Perce County from the east and south, in Whitman County from the west, and in Clearwater County and Benewah County from the south.

Inbound truck tonnage will not have any significant decreases from any direction. Inbound rail tonnage will have marginal increases in Nez Perce County from the east and south, in Whitman County from the west, in Clearwater County from the east and south, and in Benewah County from the south.

Inbound rail tonnage will not have any significant decreases from any direction.

Exhibit 33: 2007 and 2027 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%
	2027	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%
	2027	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%
	2027	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%
	2027	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%
	2027	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%
	2027	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%
	2027	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	6,735	5,485	29,781		125,919
	2027	Tonnage % vs 2007	67,621 30.3%		7,082 105.8%	63,838 120.2%	8,735 31.6%	5,485 6.3%	72,557 143.6%				225,318 78.9%
Columbia County, WA	2007	Tonnage	18,068		52,395	4,884	33,420		3,969		3,969		112,737
	2027	Tonnage % vs 2007	28,154 55.8%		68,450 30.6%	12,501 156.0%	53,291 59.5%	7,486 88.6%			7,486 88.6%		169,882 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
	2027	Tonnage % vs 2007	4,846,167 37.2%	5,815 15.9%	1,414,524 31.9%	111,423 18.0%	924,741 49.7%	157,890 10.3%	286,889 51.1%	232,104 39.4%	1,793,213 70.1%	44,502 58.7%	9,817,269 42.2%

2007 Truck Freight	2007	Tons %	51.2%					42.5%					100.0%
2007 Rail Freight	2007	Tons %		0.1%				6.3%					
2027 Truck Freight	2027	Tons %	49.4%					45.0%					100.0%
2027 Rail Freight	2027	Tons %		0.1%				5.6%					
2007 Truck + Rail	2007	Tons %	51.2%		16.9%		11.0%		5.2%		15.7%		100.0%
2027 Truck + Rail	2027	Tons %	49.4%		15.5%		11.0%		5.3%		18.7%		100.0%

SOUTHERN COUNTIES OUTBOUND FREIGHT FLOWS

Outbound freight from the Southern Counties totaled 11.9 million tons in 2007 and is forecast to grow to 16.5 million tons in 2027, an increase of 4.7 million tons or 39.4 percent (Exhibit 34).

A summary of the forecast for 2027 indicates:

- local truck freight in 2007 was at 4.9 million tons and is forecast to increase 41.6 percent by 2027 to 6.9 million tons
- directional truck freight was at 6.5 million tons and is forecast to increase 42.5 percent to 9.3 million tons
- directional rail freight was at 492,000 tons and is forecast to decrease 23.3 percent to 378,000 tons.

Exhibit 34: 2007 and 2027 Southern Counties Outbound Tonnage

Southern Counties Outbound Tonnage		2007	2027	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%

Outbound analysis *by county* (Exhibit 35) indicates:

- Nez Perce County represents over 45.6 percent of the 2007 total outbound tonnage
- Benewah County is second with 15.8 percent of the total
- Whitman County is at 11.9 percent
- Latah County is at 8.6 percent
- Asotin County is at 6.6 percent
- Clearwater County is at 6.1 percent
- Columbia County is at 2.2 percent
- Lewis County is at 2.5 percent
- Garfield County is at 0.7 percent

The 2027 TRANSEARCH™ forecast indicates that outbound tonnage from:

- Nez Perce County will increase by 860,000 tons or 15.9 percent

- Benewah County will remain level
- Whitman County will increase by 120,000 tons or 8.7 percent
- Latah County will increase 740,000 tons or 72.6 percent
- Asotin County will increase 3.9 million tons or over 400 percent
- Clearwater County will decrease 200,000 or 27 percent
- Lewis County will decrease 85,000 tons or 28.6 percent
- Columbia County will increase 8,000 tons or 3.2 percent
- Garfield County will increase 30,000 tons or 35.4 percent

The detailed outbound analysis *by direction* indicates that in 2007:

- local freight represented 40.9 percent of the total tonnage for the Southern Counties
- outbound to the western states represented 13 percent of the total
- outbound to the eastern states represented 18 percent
- outbound to the north or Canada represented 0.9 percent
- outbound to the southern states represented 27.3 percent

TRANSEARCH™ forecasts shifts in share for 2027:

- local freight increasing 1.4 percent
- outbound to the west increasing 10.8 percent
- outbound to the east decreasing 4.6 percent
- outbound to the north remaining level
- outbound to the south decreasing 7 percent

Outbound analysis *by mode* indicates that for local freight for 2007 and 2027 the mix for truck and rail freight will remain about the same: truck will have 40.9 percent and rail about 0.03 percent.

For directional outbound tonnage in 2007 truck represented 54.9 percent and rail represented 4.1 percent. TRANSEARCH™ forecasts for 2027 the mix will shift slightly with truck representing 56.2 percent and rail decreasing to 2.3 percent.

Outbound truck tonnage with significant increases will occur in Nez Perce County to the west and south, in Whitman County to the south, Latah County to the east, and Asotin County to the west.

Outbound truck tonnage with significant decreases will occur in Benewah County to the east and south and in Latah, Clearwater and Lewis Counties to the east and south.

Outbound rail tonnage will not have any significant increases to any destinations.

Outbound rail tonnage with significant decreases will occur only in Nez Perce County to the east and Benewah County to the south.

Exhibit 35: 2007 and 2027 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	Commodity Total	County %
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%
	2027	Tonnage % vs 2007	2,467,904 19.3%		478,621 66.2%	39,757 16.5%	795,556 1.0%	165,956 (14.5%)	29,313 43.3%		2,249,371 14.7%	62,489 (13.2%)	6,288,968 15.9%	37.9%
Whitman County, WA	2007	Tonnage	723,642		255,846	43,552	169,394	1,920	40,103		182,741		1,417,199	11.9%
	2027	Tonnage % vs 2007	796,076 10.0%		273,568 6.9%	18,032 (58.6%)	169,515 0.1%	1,363 (29.0%)	56,794 41.6%		225,555 23.4%		1,540,903 8.7%	9.3%
Asotin County, WA	2007	Tonnage	170,099		520,987		31,299		12,407		44,226		779,018	6.6%
	2027	Tonnage % vs 2007	918,378 439.9%		2,752,121 428.3%		86,269 175.6%		22,817 83.9%		181,235 309.8%		3,960,819 408.4%	23.9%
Latah County, ID	2007	Tonnage	664,561		46,457		100,352	28,760	4,153		173,310	3,600	1,021,193	8.6%
	2027	Tonnage % vs 2007	1,266,296 90.5%		67,090 44.4%		272,973 172.0%	18,665 (35.1%)	5,668 36.5%		129,917 (25.0%)	2,257 (37.3%)	1,762,867 72.6%	10.6%
Clearwater County, ID	2007	Tonnage	391,256		62,451		57,792	3,560	3,066		209,517	2,920	730,562	6.1%
	2027	Tonnage % vs 2007	355,493 (9.1%)		52,231 (16.4%)		35,109 (39.3%)	3,556 (0.1%)	3,607 17.6%		80,080 (61.8%)	3,138 7.5%	533,213 (27.0%)	3.2%
Benewah County, ID	2007	Tonnage	654,388		69,464		629,686	59,680	6,095		424,874	30,600	1,878,586	15.8%
	2027	Tonnage % vs 2007	851,580 30.1%		72,186 3.9%		578,961 (3.1%)	37,811 (36.6%)	7,102 16.5%		331,664 (21.9%)	16,589 (45.8%)	1,898,547 1.1%	11.5%
Garfield County, WA	2007	Tonnage	52,507		8,586		6,380		5,561		9,337		82,371	0.7%
	2027	Tonnage % vs 2007	58,799 12.0%		8,622 0.4%		27,790 335.6%		7,643 37.4%		8,678 (7.1%)		111,532 35.4%	0.7%

Southern Counties Outbound Tonnage (Continued)		Year Data		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 %
		2007	2027	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%				
	2027	Tonnage % vs 2007	117,441 18.0%	5,960 (65.8%)	26,324 (54.6%)	2,733 (59.8%)	1,814 22.8%	58,217 (46.3%)	1,227 (83.9%)	213,716 (28.6%)	1.3%				
Columbia County, WA	2007	Tonnage	37,460	194,335	130	3,440	8,314	12,988	256,867	2.2%					
	2027	Tonnage % vs 2007	51,275 36.9%	184,106 (5.3%)	121 (6.9%)	4,096 19.1%	11,429 37.5%	13,743 5.8%	264,770 3.2%	1.6%					
County Summary	2007	Tonnage	4,862,539	1,463,544	1,840,430	298,320	101,636	3,127,254	116,720	11,891,914	100.0%				
	2027	Tonnage % vs 2007	6,883,240 41.6%	3,894,506 166.1%	1,992,619 8.3%	234,180 (21.5%)	146,187 43.8%	3,278,459 4.8%	85,700 (26.6%)	16,575,335 39.4%	100.0%				

2007 Truck Freight	2007	Tons %	40.9%	54.9%	100.0%
2007 Rail Freight	2007	Tons %	0.0%	4.1%	100.0%
2027 Truck Freight	2027	Tons %	41.5%	56.2%	100.0%
2027 Rail Freight	2027	Tons %	0.0%	2.3%	100.0%
2007 Truck + Rail	2007	Tons %	40.9%	18.0%	27.3%
2027 Truck + Rail	2027	Tons %	41.5%	13.4%	20.3%

COMMODITIES THAT MOVE INTO AND OUT-OF THE SOUTHERN COUNTIES

Distribution activities around secondary freight, farm and food products, lumber, and a variety of mineral products comprise the existing base industries in the Southern Counties. To be consistent with the prior analysis for the Northern and Central Counties the first four pie charts depict tonnage percentages without freight movements by barge on the Snake River. However, because there are significant waterborne freight movements on the Snake River in the next section additional pie charts and tables are provided to more thoroughly understand the impact of waterborne freight in the Southern Counties.

Inbound commodity share (Exhibit 36): The forecast for inbound commodity flows exclusive of water freight in 2007 indicates the largest inbound commodity of lumber and wood, at 19 percent, will decline by 4.4 percent by 2027. Other commodities share rankings are:

- secondary freight at 18.3 percent
- nonmetallic minerals at 17.4 percent
- farm products at 16.7 percent
- clay and like products at 6.3 percent
- petroleum and chemicals combine for 8.2 percent.

The top four 2007 inbound commodities represent almost 89.4 percent of the total and in 2027 they represent 86.9 percent of the total. The 2027 pie chart shows that lumber and wood products decrease in share while secondary traffic and nonmetallic minerals increase in share.

Outbound commodity share (Exhibit 37): Outbound shipments in 2007 of the primary commodities were:

- nonmetallic minerals at 36.6 percent
- lumber and wood products at 25.2 percent
- secondary freight at 16 percent
- farm products at 11.4 percent.

These four commodities represented the majority of the commodities transported out of the region on the surface network. The next step will be to observe if lumber or wood products and farm products also decline after water borne transportation is evaluated.

Exhibit 36: 2007 and 2027 Southern Counties Top Ten Inbound Commodities (no water)

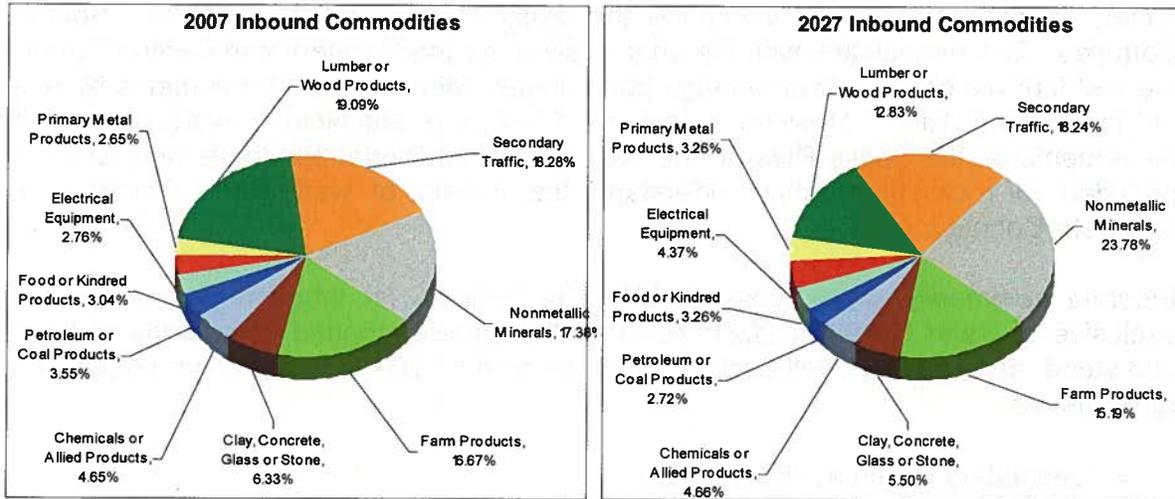
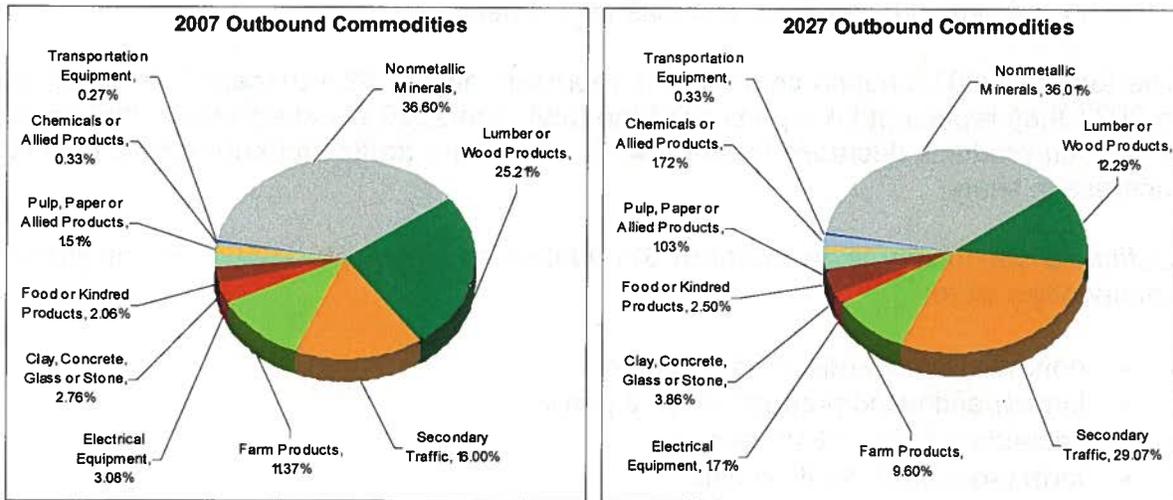


Exhibit 37: 2007 and 2027 Southern Counties Top Ten Outbound Commodities (no water)



The pie charts can be cross referenced with **(Exhibit 38)** 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. Almost all inbound commodities will experience growth with the exception of lumber and wood products.

Inbound commodity forecast growth (Exhibit 39): The table and chart shows the forecasted growth from the base year of 2007 and each of the study periods. The 2007 top ten inbound commodities for this region account for 94.4 percent of the total. By

2027, the top ten will decrease to 93.8 percent of the total, indicating only a slight diversification of the inbound freight flows:

- in 2007 the largest inbound commodity was lumber and wood products with a 11.6 percent decrease in 2012; returning to positive growth in 2017 and 2027, but not returning to the same tonnage level as in 2007
- secondary freight takes a 7.4 percent dip in 2012 over 2007 and has 11.8 percent growth in 2012 and shows 2027 increasing 37.1 percent over 2017; finishing more than 18 percent higher than 2007
- nonmetallic minerals increases for each forecast period, finishing 23.7 percent higher in 2027 over 2007
- most other commodities experience growth over the study period.

Outbound commodity forecast growth (Exhibit 40): Most outbound commodities from the Southern Counties will experience growth except for farm products, lumber and wood, electrical equipment, pulp products and metallic ores. The 2007 top ten commodities account for 99 percent and will decline to 96.8 percent in 2027:

- nonmetallic minerals is the largest commodity handled, experiencing a 13.1 percent recessionary dip in 2012 with recovery in the next two forecast periods, finishing 2027 with a 37.1 percent increase over 2007
- lumber and wood products decline in all three forecast periods with a total decrease of 32 percent in 2027 compared to 2007
- secondary freight experiences continual growth even through the recessionary period to end with 2027 growing significantly at 153 percent over 2007.
- farm products increase in each of the forecast periods ending with 2027 at 9.6 percent higher than 2007
- most other commodities also experience growth over the forecast periods.

Commodities that result from manufacturing or value added processes, such as processed foods, chemicals, electrical or transportation equipment and machinery, and others included in the top 20 group will experience double or even triple digit growth over the forecast period.

