

Freight Transportation Profile—Alaska Freight Analysis Framework

Understanding future freight activity is important for matching infrastructure supply to demand and for assessing potential investment and operational strategies. To help decisionmakers identify areas in need of capacity improvements, the U.S. Department of Transportation developed the Freight Analysis Framework (FAF), a comprehensive national database and analysis tool that examines freight flows for the truck, rail, water, and air modes. FAF also forecasts freight activity in 2010 and 2020 for each of these modes. Information about the methodology used in developing FAF is available on the Office of Freight Management and Operations' website www.ops.fhwa.dot.gov/freight.

The U.S. freight transportation network moves a staggering volume of goods each year. Over 15 billion tons of goods, worth over \$9 trillion, were moved in 1998. The movement of bulk goods, such as grains, coal, and ores, still comprises a large share of the tonnage moved on the U.S. freight network. However, lighter and more valuable goods, such as computers and office equipment, now make up an increasing proportion of what is moved. FAF estimates that trucks carried about 71 percent of the total tonnage and 80 percent of the total value of U.S. shipments in 1998. By 2020, the U.S. transportation system is expected to handle about 23 billion tons of cargo valued at nearly \$30 trillion.

Alaska

Table 1 presents information on freight shipments that have either an origin or a destination in Alaska. Domestic flows relate to freight traffic moving within Alaska or to/from other U.S. markets. International shipments reflect traffic moving to global markets through Alaska's maritime ports, airports, and border crossings.

As expected, maritime services handle the bulk of the shipments between Alaska and other U.S. and international markets. The truck and air modes also carry freight to and from Alaska and within the state. The "Other" category represents primarily international shipments of petroleum products. (Pipeline shipments are not estimated in the FAF.) Figures 1 and 2 show freight flows on the water and highway modes, which link Alaska's freight traffic to the rest of the United States.

Truck traffic is expected to increase in the state over the next 20 years. Figures 3 and 4 show total truck traffic for both 1998 and 2020, with larger truck growth occurring in urbanized areas.

Table 2 shows the top commodities shipped to, from, and within Alaska by all modes. The top commodities by weight are crude petroleum and natural products and petroleum products. By value, the top commodities are mail or contract traffic and electrical equipment.

Table 1. Freight Shipments To, From, and Within Alaska: 1998, 2010, and 2020

ALASKA	Tons (millions)			Value (billions \$)		
	1998	2010	2020	1998	2010	2020
State Total	78	83	103	60	125	222
By Mode						
Air	0.7	1.3	1.9	38	90	167
Highway	10	16	21	8	17	28
Other ^a	1.7	2.8	3.4	0.3	0.7	1.1
Rail ^b	NA	NA	NA	NA	NA	NA
Water	66	63	77	13	17	26
By Destination/Market						
Domestic	71	72	89	35	72	119
International	7	11	14	24	53	103

Note: Modal numbers may not add to totals due to rounding. NA = Not Available

^a The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.

^b FAF does not include rail data for Alaska. The Alaska Railroad Corporation reports 7.8 million tons, valued at \$65 million, were shipped in 1998. It forecast that 11 million tons, valued at \$95 million, will be shipped in 2020.

Figure 1. Freight Flows To and From Alaska by Water Mode: 1998 (tons)



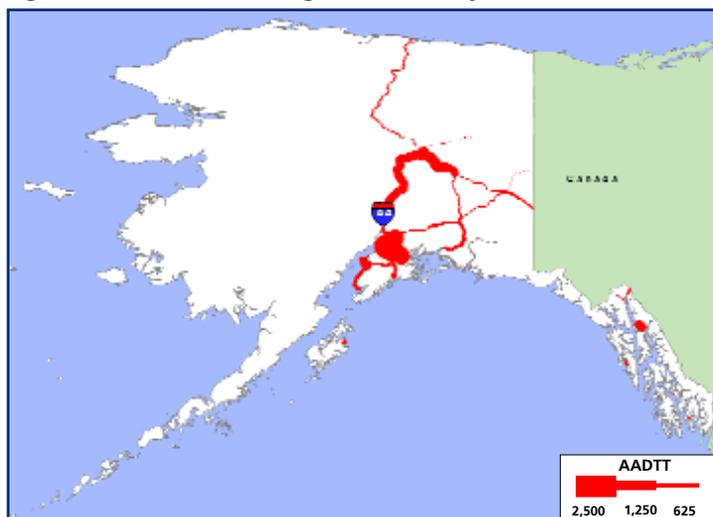
Federal Highway Administration

Figure 2. Freight Flows To, From, and Within Alaska by Truck: 1998 (tons)



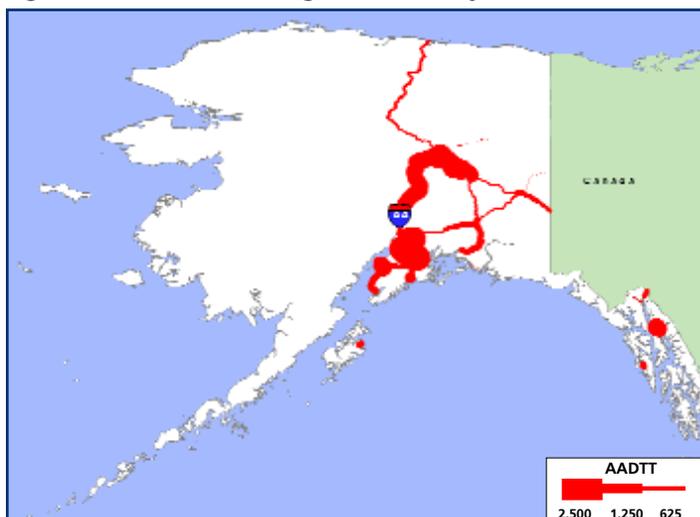
Federal Highway Administration

Figure 3. Estimated Average Annual Daily Truck Traffic: 1998



Federal Highway Administration

Figure 4. Estimated Average Annual Daily Truck Traffic: 2020



Federal Highway Administration

Table 2. Top Five Commodities Shipped To, From, and Within Alaska by All Modes: 1998 and 2020

Commodity	Tons (millions)		Commodity	Value (billions \$)	
	1998	2020		1998	2020
Crude Petroleum/Natural Gas	54	55	Mail/Contract Traffic ^a	12	58
Petroleum/Coal Products	5	8	Electrical Equipment	11	54
Lumber/Wood Products	4	5	Crude Petroleum/Natural Gas	7	8
Mail/Contract Traffic ^a	3	8	Transportation Equipment	6	13
Farm Products	3	3	Machinery	6	27

^a Mail or contract traffic includes small package shipments and postal services.

For More Information, Please Contact

Bruce Lambert
Office of Freight Management and Operations
Federal Highway Administration
202-366-4241
bruce.lambert@fhwa.dot.gov

November 2002
FHWA-OP-03-082
EDL 13786

A series of FAF products are available on the website noted below. FAF outputs include freight flow maps for states, modes, and gateways; detailed databases on traffic flows and commodity movements; information on the methodologies used to develop FAF; and forecast assumptions.

The U.S. Department of Transportation, Bureau of Transportation Statistics (BTS) is also developing a series of state transportation profiles. For more information and to obtain a copy of the BTS reports, please call 202-366-DATA.



U.S. Department of Transportation

Federal Highway Administration