

## Freight Transportation Profile—Ohio 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 data and analysis tool, including county-to-county 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/](http://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.

### Ohio

Table 1 presents information on freight shipments that have either an origin or a destination in Ohio. As shown in the table, trucks moved a large percentage of the tonnage and value of shipments, followed by rail. Figures 1 and 2 show freight flows on the highway and rail modes.

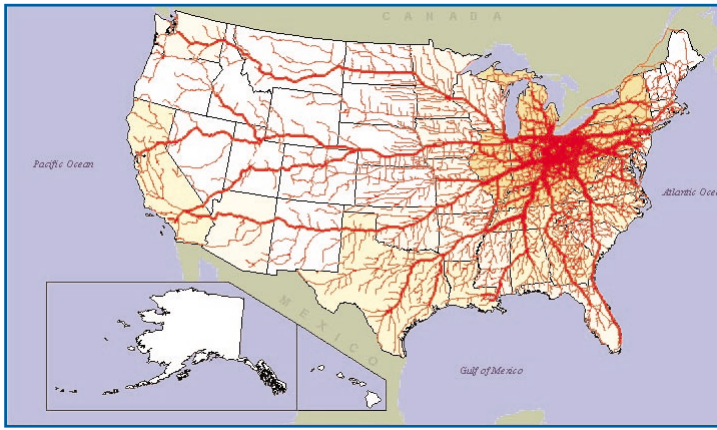
Truck traffic is expected to grow throughout the state over the next 20 years. More of the growth will occur in urban areas (Figures 3 and 4). Truck traffic moving to and from Ohio accounted for 26 percent of the average annual daily traffic on the FAF road network. Approximately 28 percent of truck traffic involved in-state shipments, and 46 percent involved trucks traveling across the state to other markets. These percentages are based on FAF estimates of origin and destination patterns for 55 percent of the trucks operating in Ohio.

Table 2 shows the top five commodity groups shipped to, from, and within Ohio. As expected, the top commodities by weight are bulk products, such as coal and minerals, and secondary traffic, which is defined as freight flows to and from distribution centers or through intermodal facilities. No commodities are assigned to this intermediate step in the transportation process. By value, the top commodities include transportation equipment, secondary traffic, and chemicals/allied products.

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

OHIO	Tons (millions)			Value (billions \$)		
	1998	2010	2020	1998	2010	2020
<b>By Mode</b>						
Highway	661	934	1,109	559	1,001	1,510
Rail	159	187	209	74	109	146
Water	115	132	140	10	13	16
Air	1	1	1	46	91	147
State Total	935	1,254	1,458	689	1,214	1,819
<b>By Destination/Market</b>						
Domestic	893	1,202	1,390	632	1,096	1,618
International	42	51	68	57	118	201

**Figure 1. Freight Flows To, From, and Within Ohio by Truck: 1998 (tons)**



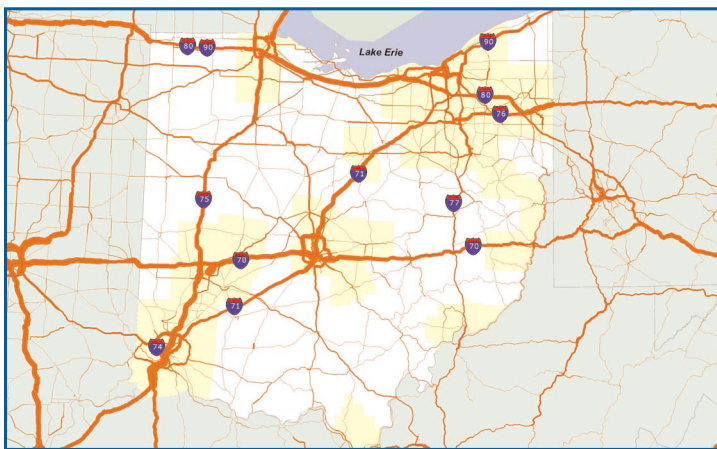
Federal Highway Administration

**Figure 2. Freight Flows To, From, and Within Ohio by Rail: 1998 (tons)**



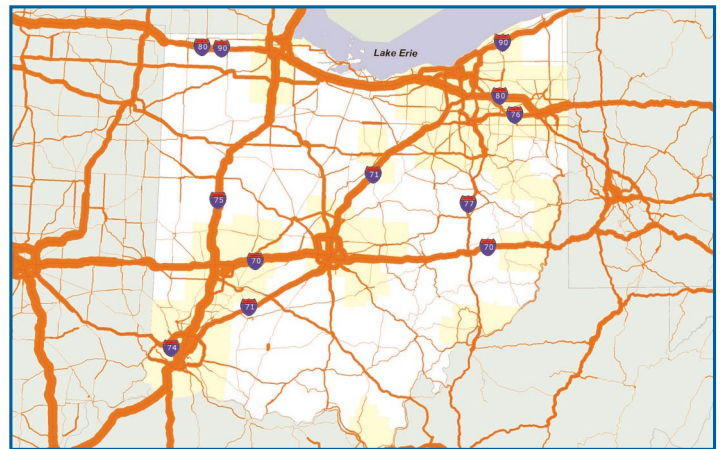
Federal Railroad Administration

**Figure 3. Daily Truck Volumes: 1998**



Federal Highway Administration

**Figure 4. Daily Truck Volumes: 2020**



Federal Highway Administration

Note: Line widths are proportional to actual truck volumes.

**Table 2. Top Five Commodities Shipped To, From, and Within Ohio: 1998 and 2020**

Commodity	Tons (millions)		Commodity	Value (billions \$)	
	1998	2020		1998	2020
Non-metallic Minerals	242	313	Transportation Equipment	196	371
Coal	110	139	Secondary Traffic	72	279
Secondary Traffic	70	181	Chemicals/Allied Products	71	183
Farm	63	75	Food/Kindred Products	51	173
Chemicals/Allied Products	62	102	Primary Metal	48	103

**For More Information, Please Contact**

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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. An online freight dialogue on freight data has also been established on the website.

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

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