

Washington State Freight Truck Origin and Destination Study: Walla Walla County



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by

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in cooperation with

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EWITS Research Report: Background and Purpose

This is the twenty-first in a series of Research Reports prepared from the Eastern Washington Intermodal Transportation Study (EWITS). The reports prepared as a part of this study provide information to help shape the multimodal network necessary for the efficient movement of both freight and people into the next century.

EWITS is a six-year study funded jointly by the Federal government and the Washington State Department of Transportation as a part of the Intermodal Surface Transportation Efficiency Act of 1991. Dr. Ken Casavant of Washington State University is Director of the study. A state-level Steering Committee provides overall direction pertaining to the design and implementation of the project. The Steering Committee includes Jerry Lenzi, Chair and Regional Administrator (WSDOT, Eastern Region); Richard Larson, Regional Administrator (WSDOT, South Central Region); Don Senn, Regional Administrator (WSDOT, North Central Region); Charles Howard (WSDOT, Planning Manager), and Eric Berger, Executive Director, County Road Administration Board. Pat Patterson represents the Washington State Transportation Commission on the Steering Committee. An Advisory Committee with representation from a broad range of transportation interest groups also provides guidance to the study. The following are key goals and objectives for the Eastern Washington Intermodal Transportation Study:

- *Facilitate existing regional and state-wide transportation planning efforts.*
- *Forecast future freight and passenger transportation service needs for eastern Washington.*
- *Identify gaps in eastern Washington's current transportation infrastructure.*
- *Pinpoint transportation system improvement options critical to economic competitiveness and mobility within eastern Washington.*

For additional information about the Eastern Washington Intermodal Transportation Study or this report, please contact Ken Casavant at the following address:

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The contents of this report reflect the views of the author, who is responsible for the facts and accuracy the data presented herein. The contents do not necessarily reflect the official views or policies of the Washington State Department of Transportation or the Federal Highway Administration. This report does not constitute a standard, specification or regulation.

EWITS PREVIOUS REPORTS NOW AVAILABLE

1. Gillis, William R. and Kenneth L. Casavant. "Linking Transportation System Improvements to New Business Development in Eastern Washington." EWITS Research Report Number 1. February 1994.
2. Gillis, William R. and Kenneth L. Casavant. "Lessons from Eastern Washington: State Route Mainstreets, Bypass Routes and Economic Development in Small Towns." EWITS Research Report Number 2. February 1994.
3. Gillis, William-R. and Kenneth L. Casavant. "Washington State Freight Truck Origin and Destination Study: Methods, Procedures, and Data Dictionary." EWITS Research Report Number 3. December 1994.
4. Gillis, William R. and Kenneth L. Casavant. "Major Generators of Traffic on U.S. 395 North of Spokane: Including Freight Trucks and Passenger Vehicles Crossing the International Border." EWITS Research Report Number 4. January 1995.
5. Newkirk, Jonathan, Ken Eriksen, and Kenneth L. Casavant. "Transportation Characteristics of Wheat and Barley Shipments on Haul Roads To and From Elevators in Eastern Washington." EWITS Research Report Number 5. March 1995.
6. Jessup, Eric and Kenneth L. Casavant. "A Quantitative Estimate of Eastern Washington Annual Haul Road Needs for Wheat and Barley Movement." EWITS Research Report Number 6. March 1995.
7. Gillis, William R., Emily Gruss Gillis, and Kenneth L. Casavant. "Transportation Needs of Eastern Washington Fruit, Vegetable and Hay Industries." EWITS Research Report Number 7. March 1995.
8. Casavant, Kenneth L. and William R. Gillis. "Importance of U.S. 395 Corridor For Local and Regional Commerce in South Central Washington." EWITS Research Report Number 8. April 1995.
9. Gillis, William R., Eric L. Jessup, and Kenneth L. Casavant. "Movement of Freight on Washington's Highways: A Statewide Origin and Destination Study." EWITS Report Number 9, November 1995.
10. Chase, Robert A. and Kenneth L. Casavant. "Eastern Washington Transport-Oriented Input Output Study: Technical Report." EWITS Research Report Number 10. March 1996.

11. Chase, Robert A. Kenneth L. Casavant. "The Economic Contribution of Transport Industries to Eastern Washington." EWITS Report Number 11. April 1996.
12. Lee, Nancy S. and Kenneth L. Casavant. "Waterborne Commerce on the Columbia-Snake." EWITS Report Number 12. October 1996.
13. Alderson, Lynn C., Kenneth L. Casavant and Eric Jessup. "Transportation Characteristics and Needs of Forest Products Industries Using Eastern Washington Highways: Part I Economic Structure of the Industry." EWITS Research Report Number 13. January 1997.
14. Eriksen, Ken and Kenneth L. Casavant. "Impact of North American Free Trade Agreement (NAFTA) on Washington Highways - Part 1: Commodity and Corridor Projections." EWITS Research Report Number 14. January 1997.
15. Alderson, Lynn C. and Kenneth L. Casavant. "Transportation Characteristics and Needs of Forest Products Industries Using Eastern Washington Highways: Part 2 Movement of Raw Logs." EWITS Research Report Number 15. May 1997.
16. Alderson, Lynn C. and Kenneth L. Casavant. "Transportation Characteristics and Needs of Forest Products Industries Using Eastern Washington Highways: Part 3 Shipment from Mills." EWITS Research Report Number 16. May 1997.
17. Alderson, Lynn C. and Kenneth L. Casavant. "Transportation Characteristics and Needs of Forest Products Industries Using Eastern Washington Highways: Part 4 Commercial Shipments." EWITS Research Report Number 17. February 1997.
18. Jessup, Eric L., John Ellis, and Kenneth L. Casavant. "A GIS Commodity Flow Model for Transportation Policy Analysis: A Case Study of the Impacts of a Snake River Drawdown." EWITS Research Report Number 18. May 1997.
19. Lee, Nancy S. and Kenneth L. Casavant. "A Commodity and Origin-Destination Analysis of Rail Traffic in Washington--1990-1995. EWITS Research Report Number 19. May 1997.
20. Edwards, Richard, Eric L. Jessup, and Kenneth L. Casavant. "Eastern Washington On-Farm and Commercial Grain Storage." EWITS Research Report Number 20. January 1998.

EWITS Previous Working Paper Series Now Available

1. Lee, Nancy and Ken Casavant. "Grain Receipts at Columbia River Grain Terminals." EWITS Working Paper #1, March 1996.
2. Lenzi, Jerry, Eric Jessup, and Ken Casavant. "Prospective Estimates for Road Impacts in Eastern Washington from a Drawdown of the Lower Snake River." EWITS Working Paper #2, March 1996.
3. Ellis, John, Eric Jessup, and Ken Casavant. "Modeling Changes in Grain Transportation Flows in Response to Proposed Snake River Drawdowns: A Case Study for Eastern Washington." EWITS Working Paper #3, March, 1996.
4. Painter, Kate and Ken Casavant. "A Comparison of Canadian Versus All Truck Movements In Washington State With A Special Emphasis On Grain Truck Movements." EWITS Working Paper #4, March 1996.
5. Jessup, Eric L., John Ellis and Kenneth L. Casavant. "Estimating the Value of Rail Car Accessibility for Grain Shipments: A GIS Approach." EWITS Working Paper #5. April 1996.
6. Painter, Kathleen M. and Kenneth L. Casavant. "Truck Movement Characteristics on Selected Truck Routes in Washington State." EWITS Working Paper #6. August 1996.
7. Lee, Nancy S. and Kenneth L. Casavant. "Grain Receipts at Columbia River Grain Terminals, 1980-81 to 1995-96." EWITS Working Paper #7. January 1997.
8. Jessup, Eric L. and Ken Casavant. "Economic Evaluation of Grain Shipment Alternatives: A Case Study of the Coulee City and Palouse River Railroad." EWITS Working Paper #8, March 1997.

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Introduction

A large statewide survey of truck traffic origination, destination, and freight characteristics provided the data for in-depth county level reports of freight truck movement in Washington State. Considerable detail on road usage, truck weight, truck configuration, commodity type, and seasonal traffic variation is available in this survey. We were able to examine a rich set of characteristics for trucks whose freight was either destined for or originating from a particular county. It is important to note the survey does not capture truck movement that did not pass through one of 20 survey sites located on major routes throughout the state (see Table 1A for survey sites). For this reason, considerable intra- and intercounty traffic will not be included for some counties depending on their proximity to a survey site. Again, these truck characteristics reflect only the truck movements as reported at the statewide survey locations.

Table 1A--Survey Sites and Traffic Direction

| Weigh Station | Site Number | Direction of Traffic | Road Designation |
|---------------------------------|-------------|----------------------|-----------------------|
| Brady West, WA | 1 | West | SR12 |
| Brady East, WA | 2 | East | SR12 |
| Cle Elum East, WA | 3 | East | I90 |
| Cle Elum West, WA | 4 | West | I90 |
| Deer Park South, WA | 6 | South | SR395 |
| Douglas POE (BC Border | 7 | North | I5 |
| Everett North, WA | 8 | North | I5 |
| Everett South, WA | 9 | South | I5 |
| Goldendale, WA | 10 | North/South | SR97 |
| Kelso South, WA | 11 | South | I5 |
| Othello, WA | 12 | All Four | SR17 |
| Pasco, WA | 13 | South | SR395 |
| Peshastin West, WA | 15 | West | SR2 |
| Plymouth POE, WA | 16 | North | SR395 |
| East Port Angeles Westbound, WA | 17 | West | SR101 |
| Sea Tac South, WA | 19 | South | I5 |
| Sea Tac North, WA | 20 | North | I5 |
| East Spokane POE, WA | 21 | West | I90 |
| Tokio East, WA | 22 | East | I90 |
| Tokio West, WA | 23 | West | I90 |
| Umatilla POE, WA | 24 | South | SR395 |
| Vancouver North, WA | 25 | North | I5 |
| Wallula POE, WA | 26 | All Four | SR12, SR395, & SR 370 |
| Osoyoos, BC (BC Border | 28 | North | SR97 |
| Oroville, WA (US Border | 29 | South | SR97 |

Information for this report was provided by an extensive study of freight truck movements on major Washington State highways conducted under the Eastern Washington Intermodal Transportation Study (EWITS). This study was the first in the United States to collect statewide freight truck origination and destination data through direct interviews of truck drivers at weigh stations. Over 300 persons conducted these personal interviews of a total of 30,000 truck drivers, providing an extensive database on freight and goods movements in Washington State.

Method of Analysis

Truck traffic characteristics at the county level were analyzed for trucks whose trips either originated or ended in a particular county. Given the survey data, there was no feasible method for analyzing truck traffic that was simply passing through the county. Detailed truck traffic characteristics for each of Washington's 39 counties by season included number of trucks with freight destined for that county per day, their payload weight and commodity type; road usage, including number of trucks per day, freight weight and commodity type; and number of trucks per day, freight weight and commodity type by city of cargo origin and destination. Truck traffic was analyzed on an annual basis for the following characteristics: county road usage, average and total truck tonnage, and number of trucks by commodity; distribution of freight weight by commodity and by road; type of commodity hauled by truck configuration; and truck carriers' home base for truck trips originating or ending in that county. Truck traffic data is likely to be more accurate in terms of relative differences by road, season, etc., than actual magnitude for any one characteristic due to the nature of the survey approach.

Presentation of Results

Detailed truck traffic characteristics are presented for Washington's 39 counties in a set of nine tables for each county. Table 1 presents information by road for truck traffic either originating or ending in that county for each season. Characteristics include total number of trucks, number of trucks with freight, average payload, and total tonnage. In addition, the percentage of loads by commodity on each road is calculated.

Tables 2 and 3 present seasonal truck traffic characteristics by city of cargo origin and city of cargo destination, respectively. For each city, the daily number of trucks, trucks with freight, their average payload weight, and total truck traffic weight are presented. Again, there is a breakdown by commodity type for each city.

Table 4 summarizes truck traffic characteristics for trucks whose trips end in that county by season. Total daily truck traffic, number of trucks with freight, average payload weight, and the total tonnage per day as well as the percentage of truckloads by commodity are presented.

Table 5 analyzes truck traffic originating or ending in that county by commodity. The number of trucks per day as well as the average and total payload by commodity is presented. In addition, truck traffic usage by road is detailed for each commodity.

Table 6 shows distribution of payload weight by commodity for truck traffic originating or ending in that county. Five weight categories in five-ton increments are used. Table 7 presents distribution of payload weight by road for truck traffic originating or ending in that county. Weight characteristics by commodity and by road are easily identified from these two tables.

Table 8 shows truck configuration by commodity for truck traffic originating or ending in that county. The percentage of trucks with freight by configuration is presented for each commodity. Table 9 presents truckers' home base by city and the number of Washington-based carriers for truck traffic originating or ending in the county.

Overall, this county-by-county disaggregation of truck movements shows the powerful impact of particular commodity movements on certain roads and during certain seasons. Farm commodities are hauled from the field to the processor or market on a seasonal basis. Lumber harvest has considerable seasonal variation as well. Construction or closures on major roads used for these purposes will need to be planned accordingly. As different industries grow or shrink, they create specific demands on the transportation infrastructure that may need to be accommodated in future transportation planning.

These results represent a summary of truck traffic origin and destination information at the county level. This information should be useful for state and county planning with respect to traffic sources, either origin or destination, and the characteristics of this traffic. It should also be valuable for planning road maintenance and construction at the county and regional level.

Walla Walla County Results

Walla Walla County is located along the Oregon border in southeastern Washington State. It is an important producer of dryland grain crops as well as vegetables for processing and the fresh market. The two major truck routes are State Routes 12 and 730 (SR12 and SR730). For SR12, truck traffic peaks in summer, averaging 808 trucks per day, and is lowest in spring, at 550 trucks per day (Table 1). Approximately half the truckloads carry food or lumber and wood products in each season, although the percentage of trucks carrying lumber or wood products falls dramatically in spring. Agricultural products are the next most important category of freight, making up 12% to 16% of daily truckloads across the seasons on SR12. Truck traffic on SR730 varies considerably by season, ranging from a low of 214 trucks per day in spring to a high of 323 trucks per day in summer. Lumber or wood products and food products are the dominant freight, except in spring, when little lumber is hauled. The average payload weight for SR730 is highest in summer, averaging 25 tons per truck.

Most of the freight originating in Walla Walla County comes from the towns of Wallula and Walla Walla (Table 2). Wallula has the highest average number of trucks per day, ranging from 150 in winter to 90 in spring and summer. Food products make up the majority of loads, ranging from 33% to 60% of truckloads, with pulp or paper products being the second most important. Freight from the town of Walla Walla ranges from an average of 123 truckloads per day in winter to 28 per day in fall. Freight originating from Walla Walla consists of petroleum products, food products, lumber or wood products, agricultural products, and fabricated metal products, with considerable seasonal fluctuation. The town of Tracy is the source for 26 to 30 trucks per day in all seasons, except winter when traffic falls to an average of 10 trucks per day. Freight consists mainly of petroleum products, agricultural products, general freight, food, and chemicals.

The towns of Walla Walla and Wallula also serve as the destination for the majority of trucks to Walla Walla County (Table 3). Inflow of trucks is highest in summer for Wallula at 373 per day and highest in fall for Walla Walla at 253 per day. Truck traffic is lowest for both towns in winter at about 180 trucks per day each. Lumber or wood products make up the majority of the loads into Wallula, while food products dominate for Walla Walla.

Overall, truck traffic destined for Walla Walla County ranges from a low averaging 686 trucks per day in spring to a high of 873 per day in fall (Table 4). Average payload weight is highest in summer at 24 tons, when lumber products made up 25% of the loaded trucks. Food products are the dominant freight, ranging from 25% to 38% of truck trips. Agricultural products make up from 13% to 14% of truckloads across the seasons.

Of the truck trips either starting or ending in Walla Walla County, one-fifth are made up of food products, 12% are lumber or wood products, and 10% are agricultural products (Table 5). Although lumber or wood products and agricultural products make up just

12% and 10% of loaded trucks, they account for 33% and 26%, respectively, of the total payload weight for the trucks in the survey. The majority of freight for all categories is hauled on SR12. SR730 is used by 20% of trucks hauling agricultural products and 50% of trucks hauling lumber or wood products.

There is a high incidence of payload weights over 30 tons for trucks carrying lumber products, with 66% of the trucks falling in this category (Table 6). Another 31% of trucks carrying agricultural products also fall in this category. Trucks carrying food products, the most common freight in the survey, generally have payloads weighing between 15 and 25 tons. Just 4% of trucks carrying food products have payloads weighing 30 tons or more.

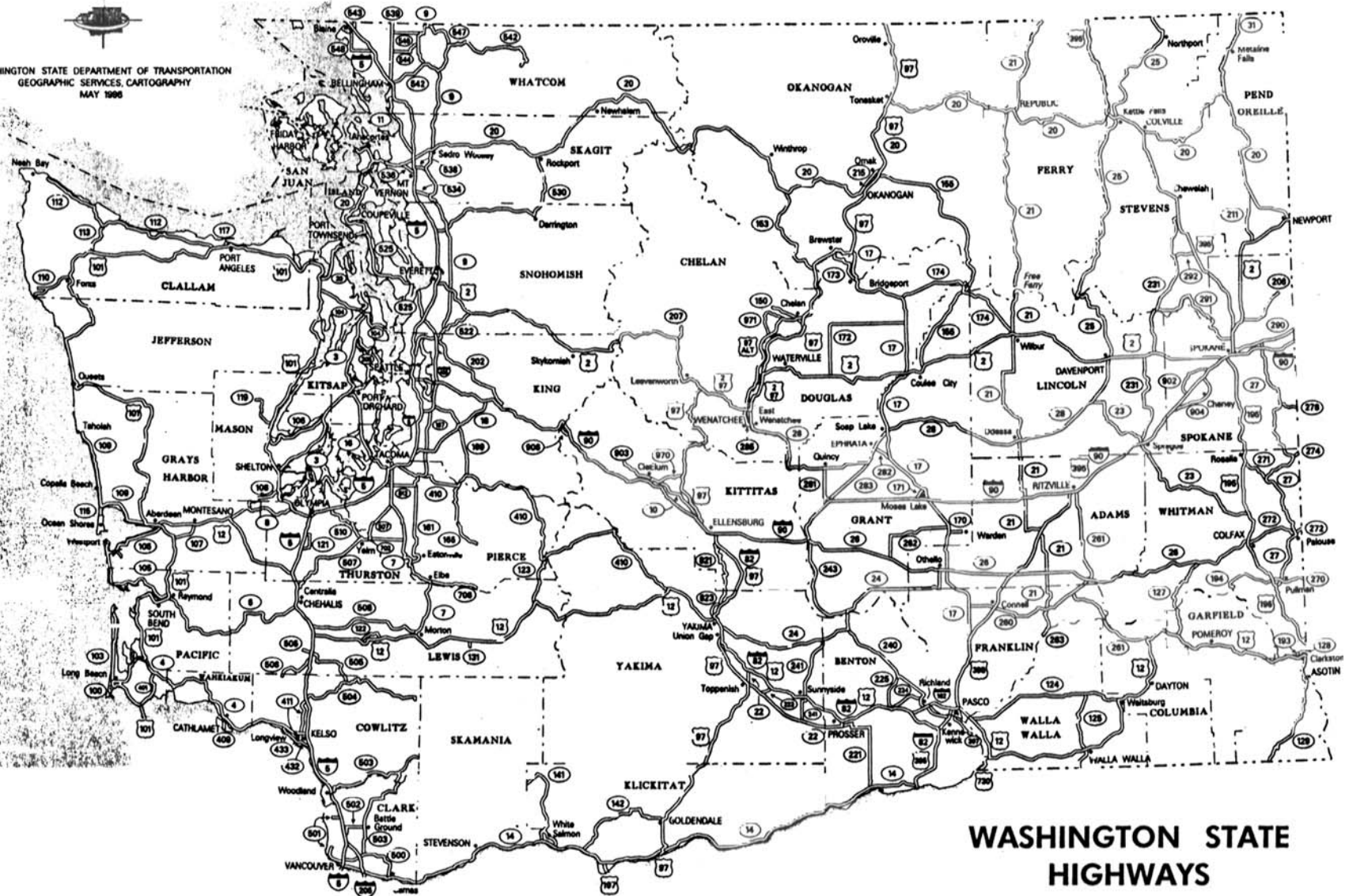
Over 25% of the truck traffic on the two main routes in Walla Walla County, SR12 and SR730, carries freight weighing 30 tons or more (Table 7). The composition of freight by weight category is fairly similar for these two routes, with slightly more traffic in the heavier categories for SR730. Over three-fourths of the trucks with freight have payloads weighing more than 20 tons for both SR730 and SR124, although SR124 has just a fraction of the total truck traffic.

The most common truck configuration for trucks carrying loads into or out of Walla Walla County is the tractor-trailer configuration, accounting for 57% of the trucks with loads (Table 8). Another 20% are tractors with two trailers while 11% are straight trucks. Ten percent are truck and trailer configurations. Food products are mainly carried by tractor-trailer configurations (77% of loads). For the trucks carrying lumber or wood products, 45% are tractor-trailers and 46% are tractors plus two trailers. Sixty-two percent of all general freight is hauled by a tractor and trailer, and another 27% is carried by tractors plus two trailers.

Over a four-day period (one day in each season), a total of 3,163 trucks, loaded or empty, were either heading for or leaving Walla Walla County (Table 9). Of these trucks, 53% were Washington-based carriers. Walla Walla is home base for 9% of the surveyed carriers, while another 7% are based out of Wallula.



WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
GEOGRAPHIC SERVICES, CARTOGRAPHY
MAY 1996



WASHINGTON STATE HIGHWAYS



Table 1--Daily Truck Traffic by Road for Each Season, Walla Walla County

| Season/ Road | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|------------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|------------------|---------|
| | | | | | Category | Percent |
| Fall: SR12 | 758 | 481 | 21 | 10,013 | Agriculture | 13 |
| | | | | | Food | 23 |
| | | | | | Lumber, wood | 22 |
| | | | | | Pulp, paper | 8 |
| | | | | | Petroleum | 6 |
| | | | | | | |
| SR730 | 225 | 134 | 24 | 3,156 | Agriculture | 14 |
| | | | | | Livestock | 5 |
| | | | | | Food | 22 |
| | | | | | Lumber, wood | 35 |
| | | | | | Pulp, paper | 5 |
| | | | | | Trans. equipment | 8 |
| | | | | | | |
| Winter: SR12 | 701 | 453 | 21 | 9,427 | Agriculture | 12 |
| | | | | | Food | 26 |
| | | | | | Lumber, wood | 18 |
| | | | | | Pulp, paper | 11 |
| | | | | | | |
| SR730 | 229 | 176 | 23 | 3,971 | Agriculture | 6 |
| | | | | | Livestock | 4 |
| | | | | | Food | 21 |
| | | | | | Lumber, wood | 16 |
| | | | | | Pulp, paper | 16 |
| | | | | | Metal | 4 |
| | | | | | Metal products | 5 |
| | | | | | Machinery | 4 |
| | | | | | General freight | 5 |
| | | | | | | |

Table 1--Daily Truck Traffic by Road for Each Season, Walla Walla County (cont.)

| Season/ Road | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|------------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|--------------|---------|
| | | | | | Category | Percent |
| Spring: SR12 | 550 | 372 | 19 | 7,006 | Agriculture | 16 |
| | | | | | Food | 44 |
| | | | | | Lumber, wood | 7 |
| | | | | | Chemicals | 8 |
| | | | | | Petroleum | 7 |
| SR730 | 214 | 148 | 23 | 3,391 | Food | 56 |
| | | | | | Lumber, wood | 13 |
| | | | | | Pulp, paper | 8 |
| | | | | | Petroleum | 9 |
| Summer: SR12 | 808 | 602 | 24 | 14,488 | Agriculture | 14 |
| | | | | | Food | 27 |
| | | | | | Lumber, wood | 26 |
| | | | | | Pulp, paper | 5 |
| | | | | | SR730 | 323 |
| Food | 36 | | | | | |
| Lumber, wood | 31 | | | | | |
| Metal | 5 | | | | | |

¹Total tonnage may differ from the number of trucks per day multiplied by the average payload due to rounding of values for average number of loaded trucks per day and average payload.

Table 2--Daily Truck Traffic by City of Cargo Origin for Each Season, Walla Walla County

| Season/ Town | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|-----------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|--------------------|---------|
| | | | | | Category | Percent |
| Fall: | | | | | | |
| Burbank | 9 | 9 | 25 | 220 | Agriculture | 100 |
| College Place | 5 | 5 | 23 | 119 | Food | 100 |
| Tracy | 30 | 30 | 18 | 536 | Agriculture | 28 |
| | | | | | Food | 38 |
| | | | | | General freight | 34 |
| | | | | | Lumber, wood | 19 |
| Walla Walla | 28 | 20 | 14 | 292 | Pulp, paper | 37 |
| | | | | | Petroleum | 18 |
| | | | | | Metal products | 26 |
| | | | | | Agriculture | 7 |
| Walla Walla | 122 | 58 | 21 | 1,184 | Food | 50 |
| | | | | | Pulp, paper | 30 |
| | | | | | Chemicals | 6 |
| | | | | | | |
| Winter: | | | | | | |
| Burbank | 25 | 25 | 16 | 392 | Food | 44 |
| | | | | | Trans. equipment | 41 |
| College Place | 8 | 8 | 14 | 105 | Food | 50 |
| | | | | | Pulp, paper | 50 |
| Tracy | 10 | 10 | 20 | 208 | Food | 100 |
| Walla Walla | 123 | 59 | 19 | 1,120 | Agriculture | 20 |
| | | | | | Lumber, wood | 20 |
| | | | | | Glass, cement | 7 |
| | | | | | Metal | 7 |
| | | | | | Metal products | 21 |
| | | | | | Medical equip. | 7 |
| | | | | | General freight | 8 |
| | | | | | Mail, packages | 7 |
| | | | | | Recycled materials | 7 |
| | | | | | Food | 33 |
| Walla Walla | 150 | 119 | 20 | 2,419 | Food | 33 |

Table 2--Daily Truck Traffic by City of Cargo Origin for Each Season, Walla Walla County (cont.)

| Season/ Town | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|-----------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|--------------------|---------|
| | | | | | Category | Percent |
| Spring: | | | | | | |
| Burbank | 17 | 17 | 21 | 363 | Food | 100 |
| Prescott | 9 | 9 | 16 | 150 | Agriculture | 45 |
| | | | | | Glass, cement | 55 |
| Tracy | 29 | 29 | 19 | 557 | Chemicals | 38 |
| | | | | | Petroleum | 12 |
| | | | | | Metal | 12 |
| | | | | | General freight | 39 |
| Walla Walla | 29 | 11 | 10 | 115 | Petroleum | 57 |
| | | | | | Metal products | 43 |
| Wallula | 90 | 40 | 22 | 863 | Food | 60 |
| | | | | | Pulp, paper | 28 |
| | | | | | Recycled materials | 12 |
| Summer: | | | | | | |
| Burbank | 10 | 6 | 28 | 175 | Lumber, wood | 50 |
| | | | | | Agriculture | 50 |
| Tracy | 26 | 26 | 24 | 610 | General freight | 42 |
| | | | | | Metal products | 11 |
| | | | | | Petroleum | 47 |
| Walla Walla | 57 | 47 | 22 | 1,044 | Machinery | 9 |
| | | | | | Pulp, paper | 7 |
| | | | | | Food | 23 |
| | | | | | Recycled materials | 7 |
| | | | | | Lumber, wood | 31 |
| Wallula | 90 | 40 | 22 | 863 | Food | 60 |
| | | | | | Pulp, Paper | 28 |
| | | | | | Recycled Materials | 12 |

¹Total tonnage may differ from the number of trucks per day multiplied by the average payload due to rounding of values for average number of loaded trucks per day and average payload.

Table 3--Daily Truck Traffic by City of Cargo Destination for Each Season, Walla Walla County

| Season/ Town | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|-----------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|--------------------|---------|
| | | | | | Category | Percent |
| Fall: | | | | | | |
| Burbank | 59 | 15 | 265 | 3,970 | Agriculture | 100 |
| Eureka | 29 | 10 | 24 | 244 | Petroleum | 100 |
| Tracy | 62 | 62 | 20 | 1,252 | Agriculture | 17 |
| | | | | | Food | 66 |
| | | | | | Glass, cement | 17 |
| Walla Walla | 253 | 209 | 16 | 3,344 | Agriculture | 9 |
| | | | | | Food | 27 |
| | | | | | Lumber, wood | 7 |
| | | | | | Petroleum | 11 |
| | | | | | Glass, cement | 6 |
| | | | | | Machinery | 9 |
| | | | | | General freight | 8 |
| Walla Walla | 234 | 160 | 28 | 4,441 | Agriculture | 8 |
| | | | | | Food | 7 |
| | | | | | Lumber, wood | 57 |
| | | | | | Pulp, paper | 9 |
| | | | | | Chemicals | 6 |
| Winter: | | | | | | |
| Burbank | 35 | 15 | 33 | 482 | Agriculture | 100 |
| Tracy | 31 | 31 | 23 | 710 | Agriculture | 38 |
| | | | | | Landscaping | 17 |
| | | | | | Lumber, wood | 13 |
| | | | | | General freight | 17 |
| | | | | | Recycled materials | 12 |

Table 3--Daily Truck Traffic by City of Cargo Destination for Each Season, Walla Walla County (cont.)

| Season/ Town | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|-------------------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|--------------------|---------|
| | | | | | Category | Percent |
| Winter: Walla Walla | 179 | 128 | 15 | 1,861 | Agriculture | 12 |
| | | | | | Rock, sand | 6 |
| | | | | | Food | 28 |
| | | | | | Lumber, wood | 6 |
| | | | | | Trans. equipment | 6 |
| | | | | | General freight | 9 |
| Wallula | 180 | 110 | 28 | 3,044 | Agriculture | 10 |
| | | | | | Livestock | 10 |
| | | | | | Food | 24 |
| | | | | | Lumber, wood | 38 |
| Spring: Burbank | 63 | 43 | 20 | 869 | Agriculture | 50 |
| | | | | | Food | 38 |
| | | | | | Machinery | 12 |
| Tracy | 22 | 22 | 20 | 427 | Food | 28 |
| | | | | | Lumber, wood | 24 |
| Walla Walla | 213 | 163 | 14 | 2,318 | Pulp, paper | 48 |
| | | | | | Agriculture | 24 |
| | | | | | Food | 30 |
| | | | | | Chemicals | 11 |
| | | | | | Petroleum | 12 |
| Wallula | 185 | 130 | 24 | 3,102 | Metal | 8 |
| | | | | | Livestock | 9 |
| | | | | | Food | 54 |
| | | | | | Lumber, wood | 20 |
| | | | | | Pulp, paper | 5 |
| | | | | | Recycled materials | 9 |

Table 3--Daily Truck Traffic by City of Cargo Destination for Each Season, Walla Walla County (cont.)

| Season/ Town | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|--------------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|-----------------|---------|
| | | | | | Category | Percent |
| Summer: Burbank | 50 | 38 | 26 | 992 | Glass, cement | 11 |
| | | | | | Food | 20 |
| | | | | | Agriculture | 68 |
| Tracy | 3 | 3 | 22 | 57 | Food | 100 |
| Walla Walla | 218 | 163 | 14 | 2,318 | Metal | 8 |
| | | | | | Agriculture | 8 |
| | | | | | General freight | 12 |
| | | | | | Lumber, wood | 9 |
| | | | | | Food | 34 |
| | | | | | Petroleum | 7 |
| Walla Walla | 373 | 250 | 27 | 6,690 | Food | 27 |
| | | | | | Agriculture | 9 |
| | | | | | Lumber, wood | 46 |

¹Total tonnage may differ from the number of trucks per day multiplied by the average payload due to rounding of values for average number of loaded trucks per day and average payload.

Table 4--Truck Traffic for Trips Originating or Ending in Walla Walla County by Season

| Season | Total Trucks Per Day (No.) | Loaded Trucks Per Day (No.) | Average Payload (Tons) | Total Tonnage ¹ | Commodity | |
|----------------|----------------------------------|-----------------------------------|------------------------------|-------------------------------|-----------------|---------|
| | | | | | Category | Percent |
| Fall: | 873 | 585 | 21 | 12,150 | Agriculture | 14 |
| | | | | | Food | 26 |
| | | | | | Lumber, wood | 19 |
| | | | | | Pulp, paper | 7 |
| | | | | | Petroleum | 6 |
| Winter: | 753 | 504 | 21 | 10,482 | Agriculture | 14 |
| | | | | | Food | 25 |
| | | | | | Lumber, wood | 16 |
| | | | | | Pulp, paper | 10 |
| | | | | | General freight | 5 |
| Spring: | 686 | 481 | 19 | 9,106 | Agriculture | 14 |
| | | | | | Food | 38 |
| | | | | | Lumber, wood | 7 |
| | | | | | Pulp, paper | 6 |
| | | | | | Chemicals | 9 |
| | | | | | Petroleum | 6 |
| Summer: | 852 | 640 | 24 | 15,606 | Agriculture | 13 |
| | | | | | Food | 26 |
| | | | | | Lumber, wood | 25 |
| | | | | | Pulp, paper | 5 |
| | | | | | General freight | 5 |

¹Total tonnage may differ from the number of trucks per day multiplied by the average payload due to rounding of values for average number of loaded trucks per day and average payload.

Table 5--Truck Trips by Commodity for Truck Traffic Originating or Ending in Walla Walla County

| Commodity | Truck Trips | Total Weight | | Avg. Payload (Tons) | County Roads Used | |
|--------------|-----------------|--------------|------------|------------------------|-------------------|------------|
| | Per Year (%) | Tons | % of Total | | Road | % of Trips |
| Food | 20 | 19 | 21 | 12,099 | SR12 | 87 |
| | | | | | SR730 | 37 |
| Lumber, wood | 12 | 31 | 33 | 11,712 | SR12 | 96 |
| | | | | | SR730 | 50 |
| Agriculture | 10 | 24 | 26 | 7,259 | SR12 | 87 |
| | | | | | SR730 | 20 |
| Other | 58 | 18 | 20 | 33,424 | SR12 | 88 |
| | | | | | SR730 | 27 |

Table 6--Weight Category by Commodity for Truck Loads Originating or Ending in Walla Walla County

| Weight Category (tons) | Agriculture | | Food | | Lumber, Wood | | Commodity Pulp, Paper | | Chemicals | | General Freight | | Other | |
|------------------------------|-------------|------------|------------|------------|--------------|------------|--------------------------|------------|-----------|------------|-----------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| <5 | 28 | 10 | 34 | 6 | 0 | 0 | 12 | 8 | 7 | 10 | 4 | 4 | 62 | 12 |
| 5 - <10 | 15 | 5 | 41 | 7 | 3 | 1 | 10 | 7 | 5 | 7 | 36 | 38 | 85 | 17 |
| 10 - <15 | 6 | 2 | 36 | 6 | 0 | 0 | 20 | 14 | 18 | 27 | 8 | 9 | 61 | 12 |
| 15 - <20 | 17 | 6 | 106 | 17 | 20 | 5 | 34 | 23 | 0 | 0 | 12 | 13 | 31 | 6 |
| 20 - <25 | 84 | 30 | 317 | 52 | 44 | 12 | 32 | 22 | 34 | 51 | 4 | 4 | 120 | 24 |
| 25 - <30 | 45 | 16 | 46 | 8 | 59 | 16 | 22 | 15 | 0 | 0 | 14 | 15 | 54 | 11 |
| >30 | 86 | 31 | 26 | 4 | 246 | 66 | 15 | 10 | 3 | 4 | 16 | 17 | 95 | 19 |
| Total | 281 | 100 | 606 | 100 | 372 | 100 | 145 | 100 | 67 | 100 | 94 | 100 | 508 | 100 |

Table 7--Weight Category by Road for Truck Loads Originating or Ending in Walla Walla County

| Weight Category (tons) | SR12 | | Road SR730 | | SR124 | |
|------------------------|-------------|------------|------------|------------|-----------|------------|
| | No. | % | No. | % | No. | % |
| <5 | 147 | 8 | 30 | 4 | 0 | 0 |
| 5 - <10 | 165 | 9 | 28 | 4 | 0 | 0 |
| 10 - <15 | 108 | 6 | 21 | 3 | 4 | 10 |
| 15 - <20 | 195 | 11 | 80 | 12 | 5 | 13 |
| 20 - <25 | 465 | 26 | 209 | 31 | 13 | 33 |
| 25 - <30 | 227 | 13 | 128 | 19 | 9 | 23 |
| >=30 | 459 | 26 | 182 | 27 | 8 | 21 |
| Total | 1766 | 100 | 678 | 100 | 39 | 100 |

Table 8--Truck Configuration by Type of Commodity Hauled, Walla Walla County (%)

| Commodity | Truck Configuration (%) | | | | | Total Loads |
|---------------------|-------------------------|------------|-----------|------------|------------|-------------|
| | 1 | 2 | 3 | 4 | 5 | |
| Agriculture | 11 | 12 | 0 | 57 | 19 | 306 |
| Livestock | 0 | 0 | 0 | 34 | 66 | 38 |
| Landscaping | 0 | 100 | 0 | 0 | 0 | 5 |
| Propane | 0 | 100 | 0 | 0 | 0 | 4 |
| Rock, sand | 0 | 34 | 0 | 35 | 31 | 22 |
| Food | 8 | 11 | 0 | 77 | 4 | 633 |
| Laundry | 0 | 0 | 0 | 100 | 0 | 10 |
| Lumber, wood | 1 | 8 | 0 | 45 | 46 | 384 |
| Furniture | 31 | 35 | 0 | 35 | 0 | 10 |
| Pulp, paper | 5 | 7 | 0 | 54 | 34 | 152 |
| Chemicals | 33 | 8 | 0 | 54 | 5 | 77 |
| Petroleum | 15 | 27 | 0 | 48 | 10 | 96 |
| Rubber, plastic | 44 | 38 | 0 | 0 | 0 | 17 |
| Glass, cement | 35 | 0 | 0 | 18 | 47 | 46 |
| Metal | 12 | 12 | 7 | 45 | 23 | 53 |
| Metal products | 42 | 0 | 0 | 58 | 0 | 39 |
| Machinery | 19 | 32 | 8 | 42 | 0 | 40 |
| Electrical | 0 | 0 | 0 | 50 | 50 | 13 |
| Trans. equipment | 40 | 0 | 0 | 51 | 9 | 35 |
| Medical equip. | 0 | 0 | 0 | 100 | 0 | 8 |
| Manufacturing parts | 100 | 0 | 0 | 0 | 0 | 3 |
| General freight | 9 | 3 | 0 | 62 | 27 | 100 |
| Mail, packages | 0 | 0 | 27 | 73 | 0 | 14 |
| Recycled materials | 35 | 6 | 0 | 58 | 0 | 49 |
| Unknown | 13 | 0 | 13 | 46 | 27 | 54 |
| Total | 11% | 10% | 1% | 57% | 20% | 2210 |

Legend: 1 = straight truck, 2 = truck and trailer, 3 = tractor only, 4 = tractor and trailer, 5 = tractor and two trailers

Table 9--Truckers' Home Base for Truck Trips Originating or Ending in Walla Walla County

| | Location | Number | Percent |
|------------------------------|-----------------|---------------|----------------|
| By Town: | | | |
| | Burbank | 183 | 6 |
| | Pasco | 148 | 5 |
| | Spokane | 148 | 5 |
| | Walla Walla | 282 | 9 |
| | Wallula | 234 | 7 |
| | Other | 2168 | 69 |
| | Total | 3163 | 100 |
| Wash. State carriers: | | 1675 | 53 |