

# Washington State Freight Truck Origin and Destination Study: Adams 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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## **DISCLAIMER**

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.

## Table of Contents

<b>Introduction</b> .....	1
<b>Method of Analysis</b> .....	2
<b>Presentation of Results</b> .....	3
<b>Adams County Results</b> .....	4

## List of Figures

Figure 1	Washington State Highways .....	6
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## List of Tables

Table 1A	Survey Sites and Traffic Direction.....	1
Table 1	Daily Truck Traffic by Road for Each Season, Adams County.....	7
Table 2	Daily Truck Traffic by City of Cargo Origin for Each Season, Adams County .....	11
Table 3	Daily Truck Traffic by City of Cargo Destination for Each Season, Adams County .....	13
Table 4	Truck Traffic for Trips Originating or Ending in Adams County by Season.....	15
Table 5	Load by Commodity for Truck Trips Originating or Ending in Adams County .....	16
Table 6	Weight Category by Commodity for Truck Loads Originating or Ending in Adams County .....	16
Table 7	Weight Category by Road for Truck Loads Originating or Ending in Adams County .....	17
Table 8	Truck Configuration by Commodity Type for Truck Loads Originating or Ending in Adams County .....	17
Table 9	Truckers' Home Base for Truck Trips Originating or Ending in Adams County .....	18

## 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.

## Adams County Results

Adams County is a large rural county located in southeastern Washington State. The two largest towns are Othello and Ritzville, with populations of 5,240 and 1,745, respectively. The major truck routes passing through Adams County are Interstate 90 (I90) and State Routes 395, 26, and 17 (SR395, SR26, and SR17). Agriculture is the major industry in this county, which produces both dryland and irrigated crops.

The four major truck routes mentioned above are used heavily year-round for agricultural products and food products (see Table 1). Truck traffic varies by season, peaking in the summer months with 414 trucks per day on SR395 and 405 trucks per day on SR17. Total tonnage per day in summer averages 6,566 and 6,385 on SR395 and SR17, respectively. Truck traffic on I90 that is headed to or leaving from Adams County ranges from a daily average of 252 per day in fall to 187 per day in spring. SR26 has the next highest levels of truck traffic, averaging from 214 per day in fall to 140 per day in winter. Very little truck traffic was reported for other state routes in the county (SR24, SR21, and SR261).

Othello is the major center of truck traffic originating or ending in Adams County. Truck traffic leaving from Othello is highest in summer at 345 trucks per day (Table 2). During fall, winter, and spring, approximately 200 trucks per day originate from Othello. Truck traffic originating from other towns in Adams County is relatively light; Ritzville has the next highest number of trucks with an average ranging from 20 to 36 trucks per day, depending on the season. Food, agricultural products, and chemicals make up the major categories of freight leaving from Adams County. Average payloads of over 30 tons occur for Hatton in winter, Lind in spring, and Ralston in summer, with agricultural products as the primary freight.

Truck traffic destined for Adams County goes mainly to Othello, ranging from 179 trucks per day in summer to 126 trucks per day in winter (Table 3). Ritzville has the next highest number of incoming truck traffic, averaging from 38 trucks per day in fall to 15 per day in winter and spring. The highest average payloads occur for freight heading for Ritzville, with a 34-ton average in winter and a 35-ton average in summer. Overall, freight destined for Adams County is quite varied, and includes food, agricultural products, machinery, petroleum, machinery, and livestock.

The total number of trucks destined for Adams County peaks in summer, averaging 632 per day with an average payload weight of 23 tons (Table 4). These trucks are carrying primarily agricultural products (36%) or food products (30%). Truck traffic is lowest in winter with an average of 381 trucks per day, again primarily carrying agricultural products (44%) or food products (32%).

Agricultural products comprise 36% of the truckloads in this county and 44% of the total tonnage (Table 5). These trucks carry an average payload of 24 tons. Food products make up 28% of the truckloads, carry 27% of the total tonnage, and have an average payload weight of 20 tons. SR395 is used by 29% of the trucks carrying agricultural

products and 37% of the trucks carrying food, while SR17 is used by 30% of the trucks carrying agricultural products and 38% of the trucks carrying food.

Weight category by commodity for trucks hauling freight into or out of Adams County is presented in Table 6. For trucks carrying food products, over half have payloads in the 20- to 25-ton category. Just 4% have payloads weighing over 30 tons. Nearly all of the trucks carrying agricultural products have payloads of 20 tons or more, with 22% weighing over 30 tons. Of the trucks carrying all other products, over one-fourth have payloads under five tons and another one-fourth have payloads between five and fifteen tons. Just 15% have payloads weighing 30 tons or more.

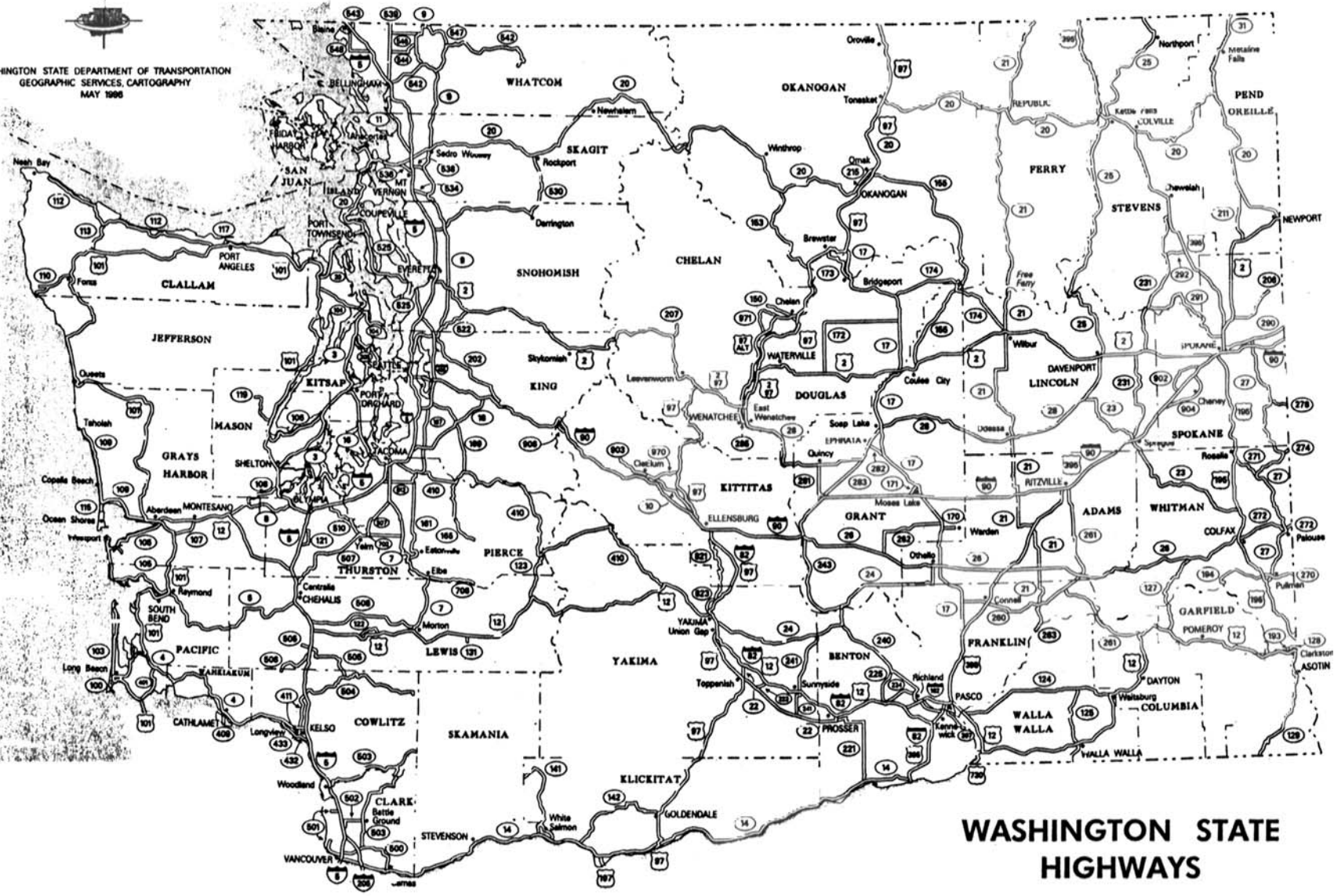
Table 7 shows weight category by roadway for truckloads originating or ending in Adams County. For trucks with loads traveling on I90, over half have loads weighing less than five tons, and just 6% have loads weighing over 30 tons. Compared to I90, SR395 has fewer trucks in the lowest weight category (46%) and more trucks (8%) in the highest weight category. Weight categories for truck traffic on SR17 are very similar to that on SR395. Just 4% of loaded trucks on SR26 are in the over 30-ton weight category, while half of the trucks have payloads weighing less than five tons. Truck traffic on SR261 is relatively light with just a fraction of the trucks surveyed on the other routes, but these trucks are most likely to fall in the heavier weight categories with 14% in the over 30-ton category.

Nearly 60% of trucks carrying loads into or out of Adams County are tractor and trailer configurations (Table 8). Another 18% are truck and trailer combinations while 14% are tractors plus two trailers. Just 9% of freight is hauled by straight trucks. Of the two major freight categories, agricultural and food products, two-thirds or more of the loads are hauled by a tractor and trailer configuration.

Over the one-year survey period, a total of 2000 trucks, loaded and empty, were either heading for or leaving Adams County (Table 9). Of these trucks, 67% were Washington-based carriers. Othello is home base for one-fourth of the surveyed carriers.



WASHINGTON STATE DEPARTMENT OF TRANSPORTATION  
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# WASHINGTON STATE HIGHWAYS



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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
Fall:						
I90	252	134	17	2,237	Agriculture	41
					Food	18
SR395	232	126	17	2,142	Agriculture	34
					Livestock	11
					Food	25
					Pulp, paper	7
SR26	214	128	19	2,385	Agriculture	43
					Livestock	7
					Food	14
					Furniture	8
					Pulp, paper	7
SR17	254	140	16	2,202	Agriculture	44
					Food	26
					Pulp, paper	6
SR24	4	4	30	120	Livestock	100
SR261	5	5	8	40	Food	100

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
Winter: I90	188	104	25	2,563	Agriculture	48
					Food	26
					Rubber, plastic	6
SR395	204	129	20	2,570	Agriculture	40
					Food	37
					Chemicals	4
SR26	140	74	21	1,533	Agriculture	59
					Food	27
					Chemicals	7
SR17	195	121	20	2,448	Agriculture	48
					Livestock	7
					Food	36

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
Spring: I90	187	106	26	2,768	Agriculture	21
					Food	18
					Chemicals	9
					General freight	15
SR395	302	189	21	3,895	Agriculture	35
					Food	35
					Lumber, wood	6
SR26	152	81	20	1,622	Agriculture	35
					Food	15
					Chemicals	6
					General freight	7
SR17	303	177	23	4,044	Agriculture	35
					Food	41
					General freight	7
SR24	7	7	28	199	Agriculture	84
					Lumber, wood	16
SR21	11	11	20	220	Agriculture	50
					Mail, packages	50
SR261	11	11	21	228	Food	55
					Chemicals	45

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
Summer: I90	243	193	22	4,341	Agriculture	26
					Food	12
					Petroleum	8
					Machinery	10
SR395	414	293	22	6,566	Agriculture	38
					Food	35
SR26	168	104	23	2,355	Agriculture	54
SR17	405	288	22	6,385	Agriculture	34
					Food	36
					Pulp, paper	5
					Petroleum	5
					Machinery	5
SR24	10	6	30	180	Agriculture	100
SR21	10	10	5	53	Metal products	33
					Machinery	33
					Mail, packages	33
SR261	12	12	31	373	Agriculture	100

<sup>1</sup>Total 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, Adams County**

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
<b>Fall:</b>						
Bruce	5	5	15	79	Agriculture	100
Othello	229	131	20	2,589	Agriculture	62
					Food	17
Ritzville	36	31	15	478	Agriculture	17
Lind	10	0	0	0	Empty	100
Washtucna	5	0	0	0	Empty	100
<b>Winter:</b>						
Hatton	4	4	33	120	Agriculture	100
Othello	196	141	22	3,115	Agriculture	51
Ritzville	20	5	26	143	Food	100
Tokio	5	5	20	103	Chemicals	100
<b>Spring:</b>						
Bruce	34	23	23	529	Agriculture	100
Hatton	12	0	0	0	Empty	100
Lind	11	11	31	332	Agriculture	100
Othello	200	145	24	3,506	Agriculture	38
					Food	53
Ritzville	27	5	1	7	Leather goods	100
Tokio	27	21	13	270	Chemicals	49
					General freight	25

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
<b>Summer:</b>						
Benge	8	8	32	239	Agriculture	43
					Chemicals	57
Bruce	19	4	22	94	Agriculture	100
Cunningham	3	3	21	73	Agriculture	100
Othello	345	248	23	5,651	Agriculture	38
					Food	43
Ralston	9	9	32	288	Agriculture	100
Ritzville	28	7	10	7	Food	50
					Metal products	50
Tokio	12	7	13	270	Chemicals	50
					Machinery	50

<sup>1</sup>Total 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, Adams County**

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
<b>Fall:</b>						
Bruce	10	0	0	0	Empty	100
Othello	134	61	14	863	Agriculture	14
					Livestock	7
					Food	23
					Furniture	17
					Pulp, paper	7
					Rubber, plastic	7
					Metal products	9
					Trans. equipment	7
					Solid waste	8
Ritzville	38	23	13	296	Agriculture	22
					Food	22
					Petroleum	22
					Metal	16
					Mail, packages	18
Washtucna	5	5	4	20	Food	100
<b>Winter:</b>						
Lind	6	6	23	137	Machinery	50
					Electrical	50
Othello	126	37	19	701	Agriculture	54
					Livestock	12
					Food	22
					Machinery	12
Ritzville	15	10	34	347	Rubber, plastic	50
Schrag	5	5	30	154	Mail, packages	100

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
<b>Spring:</b>						
Bruce	10	0	0	0	Empty	100
Lind	10	10	1	12	Machinery	50
					Trans. equipment	50
Othello	162	56	17	966	Food	13
					Lumber, wood	24
					Chemicals	11
					Petroleum	11
					General freight	22
Ritzville	15	10	15	150	General freight	100
<b>Summer:</b>						
Bruce	3	3	25	82	Chemicals	100
Lind	3	3	9	30	Mail, packages	100
Othello	179	105	22	2,340	Agriculture	32
					Food	12
					Pulp, paper	9
					Petroleum	14
					Machinery	10
Ritzville	19	9	35	315	Petroleum	50
Schrag	4	4	31	132	Machinery	100

<sup>1</sup>Total 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 Adams County by Season**

Season	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage <sup>1</sup>	Commodity	
					Category	Percent
<b>Fall:</b>	482	264	17	4,464	Agriculture	40
					Livestock	5
					Food	18
					Trans. equipment	5
<b>Winter:</b>	381	217	22	4,734	Agriculture	44
					Food	32
<b>Spring:</b>	505	292	20	5,710	Agriculture	31
					Food	29
					Lumber, wood	5
					Chemicals	6
					General freight	10
<b>Summer:</b>	632	412	23	9,335	Agriculture	36
					Food	30
					Petroleum	6
					Machinery	7

<sup>1</sup>Total 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--Load by Commodity for Truck Trips Originating or Ending in Adams County**

Commodity	Truck Trips Per Year (%)	Total Weight		Avg. Payload (Tons)	County Roads Used	
		Tons	Percent		Road	Percent
Ag. Products	36	2,406	44	24	I90	19
					SR395	29
					SR17	30
					SR26	20
Food	28	1,459	27	20	I90	14
					SR395	37
					SR17	38
					SR26	9
Other	36	1,559	29	18	I90	26
					SR395	27
					SR17	24
					SR26	18

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

Weight Category (tons)	Agricultural Products		Food		Other	
	Number	Percent	Number	Percent	Number	Percent
<5	9	2	23	7	107	27
5 - <10	19	4	18	6	59	15
10 - <15	16	4	20	6	35	9
15 - <20	14	3	20	6	19	5
20 - <25	165	39	173	53	87	22
25 - <30	109	26	58	18	30	8
>30	91	22	12	4	61	15
<b>Total</b>	<b>423</b>	<b>100</b>	<b>324</b>	<b>100</b>	<b>398</b>	<b>100</b>

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

Weight Category (tons)	Road													
	I90		SR395		SR17		SR26		SR21		SR24		SR261	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<5	46	55	511	46	510	45	327	50	14	82	9	45	0	0
5 - <10	35	4	49	4	64	6	51	8	0	0	0	0	0	0
10 - <15	34	4	39	3	42	4	24	4	3	18	0	0	5	18
15 - <20	9	1	36	3	48	4	7	1	0	0	0	0	0	0
20 - <25	153	18	302	27	307	27	122	19	0	0	4	20	16	57
25 - <30	104	12	96	9	109	10	90	14	0	0	6	30	3	11
>=30	49	6	90	8	65	6	28	4	0	0	1	5	4	14
<b>Total</b>	<b>850</b>	<b>100</b>	<b>1123</b>	<b>100</b>	<b>1145</b>	<b>100</b>	<b>649</b>	<b>100</b>	<b>17</b>	<b>100</b>	<b>2</b>	<b>100</b>	<b>28</b>	<b>100</b>

**Table 8--Truck Configuration by Commodity Type for Truck Loads Originating or Ending in Adams County**

Commodity	Truck Configuration (% by commodity)				Total Loads
	1	2	4	5	
Agricultural products	4	12	69	15	437
Food	8	14	66	11	323
Lumber and wood products	18	0	51	32	30
Furniture	0	0	100	0	13
Pulp and paper	0	30	32	38	22
Chemicals	3	23	48	25	37
Petroleum products	0	73	8	19	43
Machinery, except electrical	9	38	52	0	55
Transportation equipment	86	14	0	0	26
General freight	0	17	54	29	36
Mail & packages	50	50	0	0	29
<b>Total</b>	<b>9%</b>	<b>18%</b>	<b>59%</b>	<b>14%</b>	<b>1051</b>

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

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

	<b>Location</b>	<b>Number</b>	<b>Percent</b>
<b>By Town:</b>			
	Othello	499	25
	Spokane	148	7
	Pasco	125	6
	Moses Lake	106	5
	Other	1122	56
	Total	2000	100
<b>Washington State carriers:</b>		1339	67