

Washington State Freight Truck Origin and Destination Study: Franklin 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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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.

Franklin County

The main truck routes in Franklin County are State Routes 395, 17, 12, and 260 (SR395, SR17, SR12, and SR260) (Table 1). Truck traffic on SR395 ranges from 1302 trucks per day in summer to 691 per day in winter. Common types of freight include agricultural products, food products, chemicals, petroleum and livestock. Traffic on SR17 ranges from 453 trucks per day in summer to 260 trucks per day in winter. Approximately half of the freight on this route consists of agricultural products. Other types of freight typically hauled on SR17 include chemicals, livestock, and petroleum. Truck traffic for SR12 ranges from 335 trucks per day in fall to 172 per day in spring. Agricultural products, food products, petroleum, and chemicals are the main freight on this route, with considerable seasonal variation. For SR260, truck traffic ranges from 95 trucks per day in fall to 37 per day in summer. Freight consists of food products, agricultural products, chemicals, and petroleum, with considerable seasonal variation. The highest average payload weights, over 25 tons, occur on SR17 in winter and summer and on SR260 in winter.

The majority of truck traffic originating from Franklin County leaves from Pasco and Connell. Traffic from Pasco ranges from a high of 472 trucks per day in summer to a low of 328 in winter (Table 2). For Connell, the highest traffic of 202 trucks per day also occurs in summer and the lowest at 102 per day in winter. A much smaller amount of daily truck traffic, ranging from 5 to 32 trucks per day, also originates from the towns of Basin City and Eltopia, with considerable seasonal variation. Agriculture and food products make up the majority of freight leaving Franklin County. Other common types of freight categories include livestock, chemicals, machinery, and petroleum. The highest average payload weights are recorded for freight leaving Basin City, ranging from 24 to 28 tons across the seasons.

The majority of trucks destined for Franklin County are headed to Pasco, with a daily count ranging from 515 trucks per day in winter to 661 trucks per day in spring (Table 3). Connell receives from 65 to 81 trucks per day across the seasons, while trucks headed for Mesa range from none to 15 per day across the seasons, according to the survey results. Agricultural products are the predominant freight destined for towns in Franklin County, with some seasonal variation. Food products, general freight, livestock, and lumber or wood products are other common freight categories. Average payload weights were highest for Mesa, averaging 30 tons in both fall and winter.

Total truck traffic heading for or leaving from Franklin County ranges from 1552 trucks per day in summer to 1095 trucks per day in winter (Table 4). Agricultural and food products are the predominant freight, making up half or more of all trucks with loads. Chemicals, general freight, livestock, and petroleum are also common. Average payload weights ranged from 18 tons in fall to 23 tons in summer.

Table 5 shows road usage by type of freight for the major commodities hauled into or out of Franklin County over the entire year. SR395 is used by 70% to 76% of trucks for all commodities. SR17 is used by 38% of trucks carrying agricultural products and 33%

of the trucks carrying chemicals, but just 12% of trucks carrying food. SR12 is used by 14% of trucks carrying agricultural products, but about one-fifth or more of the trucks carrying food, chemicals, and other non-agricultural products. Other routes used by 12% or less of the trucks carrying a main commodity group include SR182, SR260, and SR263. Agricultural products account for 38% by weight of the total truck freight for the county, with an average payload weight of 25 tons.

Weight category by commodity for trucks hauling freight into or out of Franklin County is presented in Table 6. For trucks carrying agricultural products, over 80% weigh over 20 tons, with one-fourth in the over 30-ton category. Half of the trucks carrying food are in the 20- to 25-ton weight category, while 13% weigh less than ten tons. Twenty-four percent of the trucks carrying chemicals also weigh less than 10 tons, but the majority weighs 20 tons or more.

Table 7 shows weight category by roadway for truckloads originating or ending in Franklin County. Of the loaded trucks on SR395, 19% have payload weights of over 30 tons, and 45% of the loads are in the 20- to 30-ton range. On SR17, 28% of the payloads weigh 30 tons or more, and 38% fall in the 20- to 30-ton range. Just 2% of the loaded trucks on SR12 fall in the over 30-ton category, while 20% of trucks on SR24 are that category. Approximately half of the loaded trucks on both SR12 and SR24 weigh between 20 and 30 tons.

Over half of trucks carrying loads into or out of Franklin County are tractor-trailer configurations (Table 8). Another 19% are tractors plus two trailers. Fifteen percent of freight is hauled by truck and trailer combinations, while 12% is hauled by straight trucks. For the major freight categories, agricultural and food products, approximately two-thirds of the loads are hauled by tractor-trailer configurations. Two-thirds of the loads with general freight are hauled by tractors plus two trailers.

Over the four-day survey period (one day in each season), a total of 5280 trucks, loaded and empty, were either heading for or leaving Franklin County (Table 9). Of these trucks, 64% were Washington-based carriers. Pasco is home base for 16% of the surveyed carriers, while Spokane is home base for another 8%.

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall: SR17	356	171	22	3,750	Agriculture	48
					Livestock	10
					Chemicals	15
SR12	335	184	20	3,643	Agriculture	42
					Food	14
					Chemicals	11
					Machinery	6
SR395	713	391	20	7,941	Agriculture	40
					Livestock	11
					Food	15
					Chemicals	11
SR260	95	57	21	1,208	Agriculture	63
					Food	19
					Lumber, wood	8
					Chemicals	9
Winter: SR17	260	137	26	3,512	Agriculture	53
					Livestock	6
					Food	16
					Chemicals	7
					Petroleum	10
					Machinery	5

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Winter: SR12	221	134	15	2,009	Agriculture	11
					Rock, sand	6
					Food	19
					Chemicals	6
					Petroleum	9
					General freight	14
SR395	691	464	22	9,974	Mail, packages	6
					Agriculture	32
					Livestock	7
					Food	21
					Chemicals	6
					Petroleum	7
					Machinery	5
					General freight	5
					Food	70
					Agriculture	30
SR260	78	27	2,106	27		
Spring: 17	357	154	21	3,194	Agriculture	42
					Livestock	11
					Chemicals	19
					Petroleum	12

Table 1--Daily Truck Traffic by Road for Each Season, Franklin 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	172	92	18	1,700	Agriculture	14
					Livestock	7
					Food	7
					Lumber, wood	7
					Chemicals	20
					Petroleum	14
					Metal	7
					Electrical	7
					General freight	13
					SR395	988
					Livestock	7
					Food	20
					Chemicals	10
					Tobacco	8
					Trans. equipment	6
SR260	81	30	20	600	Food	20
					Agriculture	38
					Petroleum	42
Summer: SR17	453	266	25	6,557	Agriculture	55
					Food	15
					Chemicals	6
					Petroleum	10
SR12	237	177	24	4,177	Agriculture	17
					Tobacco	35
					Petroleum	16
					General freight	5

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Summer: SR395	1,302	814	23	18,435	Agriculture	36
					Food	25
					Chemicals	7
					Petroleum	6
					General freight	6
SR260	37	28	18	501	Food	86
					Paper, pulp	14

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, Franklin County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
Basin City	11	11	28	313	Agriculture	100
Connell	130	82	20	1,654	Agriculture	50
					Livestock	18
					Food	26
					Chemicals	6
Eltopia	16	12	24	300	Agriculture	100
Pasco	397	289	17	5,025	Agriculture	34
					Food	13
					Chemicals	11
					Petroleum	4
					Machinery	7
					General freight	10
Winter:						
Basin City	29	20	24	476	Agriculture	80
					Machinery	20
Connell	102	81	21	1,715	Agriculture	19
					Food	81
Eltopia	5	5	22	114	Agriculture	100
Pasco	328	216	19	3,997	Agriculture	33
					Food	12
					Chemicals	8
					Petroleum	10
					General freight	18

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Spring:						
Basin City	21	15	27	420	Agriculture	100
Connell	178	92	18	1,693	Agriculture	11
					Food	67
					Chemicals	5
					Trans. equipment	5
					General freight	5
Etopia	22	6	2	13	Agriculture	100
Pasco	333	231	19	4,460	Agriculture	25
					Food	12
					Chemicals	17
					Petroleum	16
					Electrical	5
					General freight	7
Summer:						
Basin City	16	16	28	428	Agriculture	70
					Machinery	30
Connell	202	139	21	2,956	Agriculture	17
					Food	83
Etopia	32	24	26	625	Agriculture	100
Pasco	472	356	21	7,515	Agriculture	41
					Food	14
					Chemicals	9
					Petroleum	9
					General freight	7

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, Franklin County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
Connell	65	26	22	566	Agriculture	83
					Lumber, wood	17
Mesa	12	7	30	215	Agriculture	100
Pasco	530	245	18	4,302	Agriculture	16
					Livestock	12
					Food	17
					Chemicals	9
					Machinery	6
					General freight	14
Winter:						
Connell	78	34	23	781	Agriculture	22
					Food	69
					Pulp, paper	9
Mesa	7	3	30	90	Agriculture	100
Pasco	515	316	20	6,432	Agriculture	28
					Livestock	11
					Food	7
					Lumber, wood	5
					Chemicals	6
					Petroleum	5
					Machinery	6
					Trans. equipment	7
					General freight	10
Spring:						
Connell	65	32	26	826	Agriculture	50
					Food	30
					Petroleum	19

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Spring:						
Mesa	15	10	4	38	Lumber, wood	36
					Chemicals	64
Pasco	661	282	17	4,847	Agriculture	16
					Livestock	11
					Food	12
					Lumber, wood	6
					Chemicals	9
					Machinery	7
					Trans. equipment	10
Summer:						
Connell	81	47	27	1,263	Food	39
					Agriculture	61
Pasco	630	319	24	7,535	Machinery	5
					Trans. equipment	6
					General freight	11
					Petroleum	9
					Livestock	11
					Agriculture	30
					Food	9
					Chemicals	7

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 Franklin County by Season

Season	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:	1,274	741	18	13,616	Agriculture	35
					Livestock	6
					Food	15
					Chemicals	8
					Machinery	5
					General freight	9
Winter:	1,095	690	20	13,965	Agriculture	30
					Livestock	5
					Food	20
					Chemicals	6
					Petroleum	6
					General freight	10
Spring:	1,339	685	20	13,694	Agriculture	23
					Livestock	6
					Food	19
					Chemicals	12
					Petroleum	8
					Trans. equipment	6
Summer:	1,552	920	23	21,196	General freight	5
					Agriculture	37
					Food	25
					Chemicals	6
					Petroleum	7
General freight	7					

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 Franklin County

Commodity	Truck Trips Per Year (%)	Total Weight		Avg. Payload (Tons)	County Roads Used	
		Tons	% of Total		Road	% of Trips
Agriculture	18	24,258	38	25	SR395	75
					SR17	38
					SR182	7
					SR260	6
					SR12	14
					SR263	1
Food	12	12,109	19	20	SR395	76
					SR17	12
					SR12	19
					SR182	12
					SR260	10
Chemicals	5	4,394	7	18	SR395	73
					SR17	33
					SR12	21
					SR182	5
Other	65	19,190	30	19	SR395	70
					SR12	22
					SR17	20
					SR182	14
					SR260	2

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

Weight Category (tons)	Commodity							
	Agriculture		Food		Chemicals		Other	
	No. of Loads	% of Total	No. of Loads	% of Total	No. of Loads	% of Total	No. of Loads	% of Total
<5	27	3	51	9	54	24	184	24
5 - <10	12	1	25	4	19	8	185	8
10 - <15	34	4	26	5	16	7	135	7
15 - <20	53	6	57	10	8	4	113	4
20 - <25	332	36	299	53	65	29	177	29
25 - <30	224	24	82	15	34	15	140	15
>30	241	26	22	4	32	14	197	14
Total	923	100	562	100	246	100	1071	100

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

Weight Category (tons)	Road											
	SR12		SR182		SR395		SR17		SR24		SR260	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<5	99	21	83	23	395	18	135	18	12	13	20	14
5 - <10	49	10	27	7	157	7	52	7	4	4	16	11
10 - <15	46	10	56	15	116	5	33	5	3	3	9	6
15 - <20	38	8	47	13	134	6	29	4	5	5	6	4
20 - <25	135	28	75	21	689	31	137	19	31	34	46	32
25 - <30	102	21	57	16	310	14	141	19	18	20	37	26
>=30	11	2	19	5	418	19	205	28	18	20	8	6
Total	480	100	364	100	2219	100	732	100	91	100	142	100

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

Commodity	Truck Configuration					No. of Loads
	1	2	3	4	5	
Agricultural products	4	14	0	62	19	969
Livestock	3	13	0	74	10	152
Landscaping materials	0	0	0	50	50	9
Rock & sand	0	19	0	34	47	31
Food	11	19	1	64	4	613
Textiles	50	0	0	50	0	7
Laundry, misc. apparel	100	0	0	0	0	13
Lumber & wood products	16	7	0	69	7	52
Furniture	0	0	0	100	0	15
Pulp & paper	0	12	0	53	35	31
Printed material	0	0	0	100	0	4
Chemicals	29	10	0	40	21	246
Petroleum products	9	33	0	26	32	185
Rubber & plastic products	43	23	0	17	16	31
Leather goods	0	0	0	100	0	3
Glass and cement products	16	0	0	26	58	20
Metal, metal products	27	0	7	44	21	54
Fabricated metal products	61	0	0	0	39	14
Machinery	25	17	3	53	2	120
Electrical equipment	13	0	0	27	60	35
Transportation equipment	16	24	0	61	0	111
Medical & photo. instruments	0	0	0	100	0	4
General freight	2	10	0	20	66	234
Mail & packages	39	0	6	47	8	64
Recycled materials	33	0	0	55	12	11
Total	12%	15%	1%	53%	19%	3,028

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 Franklin County

Location	Number	Percent
By Town:		
Connell	303	6
Hermiston	207	4
Othello	228	4
Pasco	845	16
Spokane	404	8
Other	3,293	62
Total	5,280	100
Wash. State carriers:	3,358	64