

Washington State Freight Truck Origin and Destination Study: Stevens 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.
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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.
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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.

Stevens County Results

The predominant truck route in Stevens County is State Route 395 (SR395). Truck traffic either originating from or headed to Stevens County ranges from 179 per day in summer to 280 per day in spring on this roadway (Table 1). Other major truck routes include State Routes 20, 231, and 25 (SR20, SR231, and SR25), but daily truck traffic is much lower on these routes. On SR20, truck traffic ranges from 54 per day in winter to 12 per day in summer. On SR231, traffic remains fairly steady year-round at 20 to 26 trucks per day. For SR25, traffic ranges from 8 trucks per day in spring to 30 trucks per day in fall. Lumber or wood products and paper or pulp products are the predominant freight for all roads except SR231 and SR25 in spring. Given the predominance of lumber or wood products carried by trucks in this county, the relatively high average payload weight is not surprising. On SR395, the average payload weight ranges from 22 to 25 tons across the seasons. On the other routes, the average payload weight is even higher, for the most part, due to the higher percentage of freight falling into the lumber or wood products category. The highest average payload weight of 34 tons was recorded for SR20 in summer.

Most truck traffic in Stevens County originates from the towns of Colville, Kettle Falls, and Arden (Table 2). Chewelah, Springdale, Valley, and Addy are also significant sources of truck traffic in the county. Truck traffic from Colville ranges from 96 per day in spring to 59 trucks per day in fall, with lumber or wood products being the primary freight category in all seasons. Daily truck traffic from the other towns in Stevens County tends to be less than 40 trucks per day, with lumber or wood products being a major freight category for most. Rock or sand is another common freight category, particularly from the towns of Valley, Chewelah, and Addy. Average payload weights tend to quite high, frequently averaging above 25 tons.

Table 3 describes the characteristics of trucks destined for towns in Stevens County by season. Daily truck traffic heading for Colville ranges from a high of 17 trucks per day in spring to a low of three per day in summer. Addy, Kettle Falls, Chewelah, and Valley also receive small amounts of daily truck traffic in most seasons. Food products, wood or lumber products, metal, petroleum, and glass or cement products are among the variety of freight headed for Stevens County. The heaviest average payload weight of 29 tons is metal freight headed for Addy in both fall and spring. Of the 17 trucks destined for Stevens County during the summer months, six refused to participate in the survey. All were carrying wood chips and headed for Kettle Falls; their average payload weight was 69 tons. These data were not included in the survey as only partial information was completed for these non-participants.

Daily truck traffic counts for trucks either destined for or originating from Stevens County show that total traffic is highest in spring at 312 per day and lowest in summer at 214 per day (Table 4). The predominant freight in all seasons is lumber or wood products, ranging from 41% of all trucks with loads in spring to 73% of all trucks with loads in summer. Other important freight categories include food products, rock or sand, and

metal. The average payload weight ranges between 22 and 25 tons across the seasons.

Over half of all loaded trucks in Stevens County carry lumber or wood products (Table 5). The average payload weight is 27 tons, compared to 18 tons for all other freight. Most traffic in the county is carried on SR395; 90% of all lumber or wood products and 81% of all other freight travels on this road. The other two main routes, SR25 and SR231, are used by just 6% to 12% of trucks with freight, depending on the category.

Payload weight is broken down by five ton increments for each major category of freight in Table 6. Lumber or wood products exceed 30 tons for 45% of the loads. Loads in the agricultural products and food products categories tended to be in the lower weight categories. Freight in the “other” category have 26% of loads in the over 30 tons range, perhaps due to the inclusion of rock and sand in this category.

The distribution of weight categories by major routes for all truck traffic is presented in Table 7. For Stevens County, SR395 is the most heavily traveled route, with 638 trucks in the survey. Over one-third of these trucks have a payload weight of over 30 tons. Another 44% lie in the 20- to 30-ton weight bracket. On SR25, nearly half of the 53 surveyed trucks carry payloads weighing over 30 tons while on SR231, 61% of the 77 trucks in this survey fall in the highest weight class. (The survey method used for this study is less accurate at portraying movements within counties due to the location of survey locations at major weigh stations. Another potentially misleading phenomenon in the survey is the tendency for trucks with extremely heavy payloads to refuse to participate in the survey.)

Type of truck configuration by commodity hauled is presented in Table 8. Nearly half of all freight is hauled by tractor-trailer configurations, and another one-third is hauled by tractors plus two trailers. Just 8% of all freight is hauled by straight trucks, while another 12% is hauled by truck and trailer configurations.

Table 9 presents the distribution of truckers’ home base for truck trips originating or ending in this county. The most common base is Spokane, with 25% of the truck trips. Colville and Lewiston, Idaho, are the next most common bases for 7% and 6% of truck trips, respectively. Washington-based carriers represented 61% of all truck trips in the survey for this county.

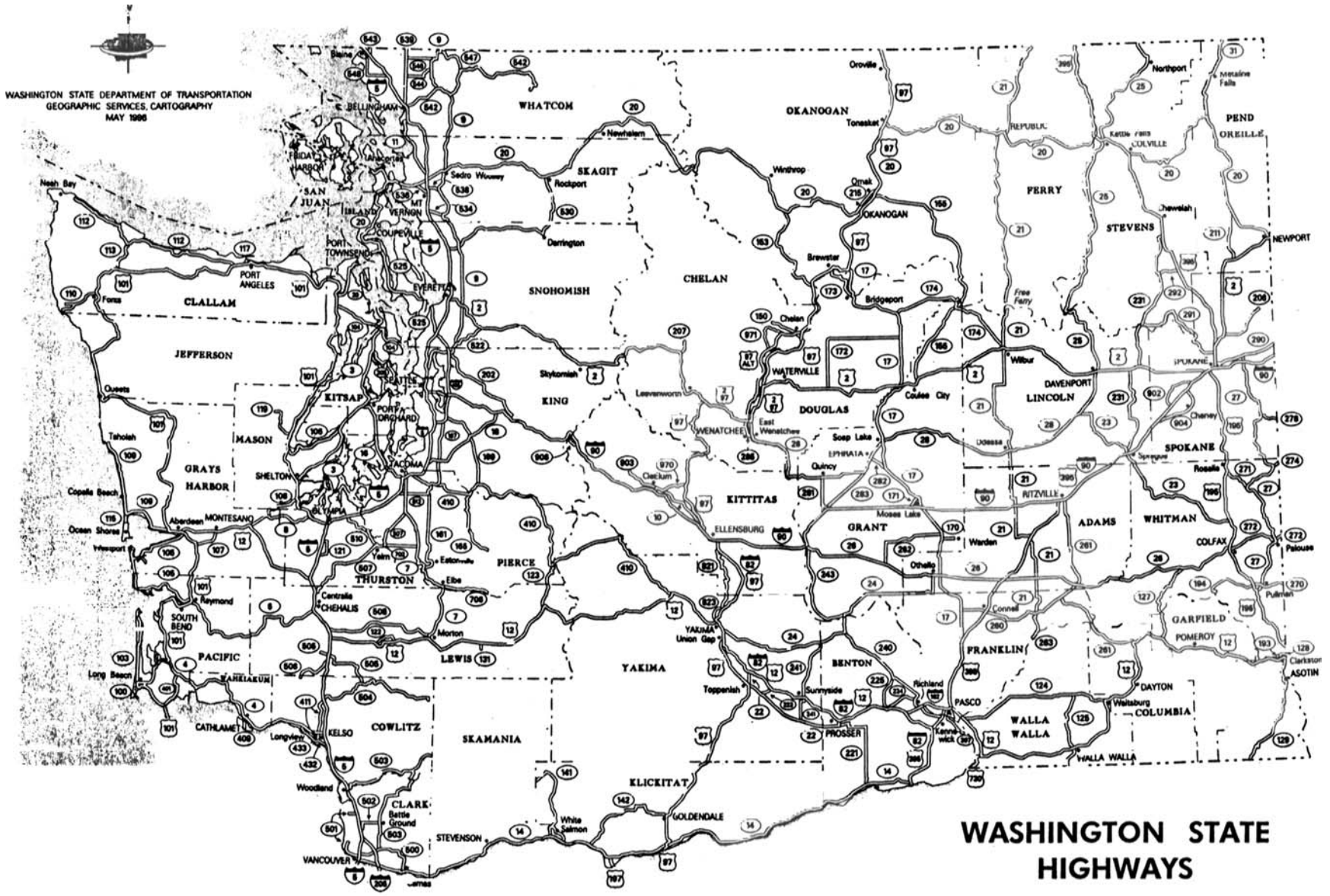


Table 1--Daily Truck Traffic by Road for Each Season, Stevens County

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
SR395	204	155	23	3,532	Lumber, wood	68
					Food	5
SR20	44	39	28	1,094	Lumber, wood	73
					Petroleum	11
SR231	26	21	30	634	Rock, sand	25
					Lumber, wood	75
SR25	30	14	19	255	Lumber, wood	51
					Pulp, paper	37
					Chemicals	12
Winter:						
SR395	221	160	25	3,914	Rock, sand	9
					Food	5
					Lumber, wood	55
					Metal	8
SR20	54	51	27	1,398	Livestock	7
					Food	6
					Lumber, wood	55
					Chemicals	7
					Petroleum	6
					Metal	16
SR231	24	18	26	463	Rock, sand	29
					Lumber, wood	37
					Metal	25
					Mail, packages	8
SR25	15	15	24	358	Lumber, wood	56
					Glass, cement	34

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

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Spring: SR395	280	217	22	4,806	Rock, sand	11
					Food	11
					Lumber, wood	46
					Chemicals	5
					Metal	6
SR20	25	21	25	540	Rock, sand	6
					Lumber, wood	71
					Chemicals	12
					Electrical	6
					General freight	6
SR231	20	19	24	444	Rock, sand	29
					Lumber, wood	28
					Glass, cement	31
					Metal	6
					Machinery	7
SR25	8	6	16	97	Food	79
					Lumber, wood	21
Summer: SR395	179	113	25	2,832	Rock, sand	11
					Lumber, wood	70
SR20	12	12	34	397	Lumber, wood	100
SR231	20	20	28	566	Rock, sand	49
					Lumber, wood	51
SR25	22	22	19	407	Food	5
					Lumber, wood	89
					Machinery	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, Stevens County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
Addy	3	2	24	37	Lumber, wood	100
Arden	35	33	25	841	Lumber, wood	100
Chewelah	20	13	19	252	Agriculture	12
					Rock, sand	24
					Lumber, wood	12
					Chemicals	12
					General freight	41
Colville	59	33	23	745	Lumber, wood	66
					Petroleum	5
					Metal	5
					Metal products	5
					Machinery	10
					Solid waste	5
Kettle Falls	33	28	25	689	Food	11
					Lumber, wood	83
					Machinery	6
Northport	5	5	24	113	Lumber, wood	67
					Machinery	33
Springdale	16	16	28	452	Food	33
					Lumber, wood	67
Valley	5	5	33	174	Rock, sand	100
Waterloo	10	10	8	72	Furniture	50
Winter:						
Addy	15	13	28	376	Food	11
					Chemicals	27
					Metal	61
Arden	26	23	28	657	Lumber, wood	100
Chewelah	12	4	19	86	Agriculture	33
					Laundry	33
					Machinery	33

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Winter: Colville	85	53	24	1285	Livestock	7
					Lumber, wood	75
					Furniture	6
					Lumber, wood	89
					Chemicals	6
Kettle Falls	35	26	24	615	Machinery	6
					Lumber, wood	89
					Glass, cement	25
					Rock, sand	90
Springdale	7	6	23	140	Mail, packages	10
Valley	16	16	27	417	Food	100
Waterloo	5	5	9	44		
Spring: Addy	29	25	23	583	Rock, sand	20
					Lumber, wood	5
					Chemicals	29
					Metal	25
					Solid waste	21
Arden	18	18	29	509	Lumber, wood	100
Chewelah	23	16	15	238	Agriculture	23
					Food	8
					Lumber, wood	39
					Furniture	8
					Chemicals	8
					General freight	8
					Mail, packages	8
					Agriculture	10
Colville	96	55	20	1120	Livestock	10
					Food	11
					Lumber, wood	54
					Machinery	7

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Spring:						
Kettle Falls	39	32	29	909	Lumber, wood	96
Northport	3	3	13	34	Food	50
					Lumber, wood	50
Springdale	6	1	14	18	Machinery	100
Valley	39	39	23	909	Rock, sand	49
					Lumber, wood	13
					Glass, cement	28
Waterloo	10	10	8	78	Food	100
Summer:						
Addy	8	4	33	118	Glass, cement	33
					General freight	33
					Rock, sand	33
Arden	23	16	28	430	Lumber, wood	100
Chewelah	11	4	27	96	Rock, sand	33
					Agriculture	33
					Food	33
Colville	79	49	24	1202	Machinery	5
					General freight	5
					Lumber, wood	76
Kettle Falls	42	27	25	683	Lumber, wood	87
Northport	9	5	18	86	Machinery	25
					Lumber, wood	75
Springdale	7	5	22	104	Agriculture	75
					Lumber, wood	25
Valley	11	11	29	328	Rock, sand	89
					Lumber, wood	11
Waterloo	4	4	13	54	Lumber, wood	100

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, Stevens County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹ (Tons)	Commodity	
					Category	Percent
Fall:						
Addy	5	5	29	153	Metal	100
Colville	15	15	17	255	Food	21
					Lumber, wood	34
					Petroleum	28
					Metal products	7
					General freight	10
Kettle Falls	3	4	25	90	Lumber, wood	100
Winter:						
Chewelah	3	3	23	69	Petroleum	100
Colville	13	13	17	223	Food	23
					Glass, cement	38
					Metal	38
Spring:						
Addy	6	6	29	185	Metal	100
Chewelah	5	5	18	92	Food	100
Colville	17	17	15	262	Food	51
					Lumber, wood	20
					General freight	28
Kettle Falls	6	5	12	63	Agriculture	100
Summer:						
Arden	4					
Colville	3	3	25		Glass, cement	100
Kettle Falls	12	8	18		Lumber, wood	34
					Chemicals	66
					Valley	4

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 Stevens County by Season

Season	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:	247	191	22	4,277	Lumber, wood	60
					Food	7
Winter:	229	166	24	4,050	Rock, sand	9
					Food	8
					Lumber, wood	54
					Metal	8
Spring:	312	243	22	5,370	Agriculture	6
					Rock, sand	10
					Food	16
					Lumber, wood	41
					Chemicals	5
					Metal	5
Summer:	214	143	25	3,558	Rock, sand	9
					Lumber, wood	73

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 Stevens County

Commodity	Truck Trips Per Year (%)	Total Weight		Avg. Payload (Tons)	County Roads Used	
		Tons	% of Total		Road	% of Trips
Lumber, wood	55	10,979	64	27	SR395	91
					SR25	9
					SR231	9
Other	45	6,216	36	18	SR395	81
					SR25	6
					SR231	12

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

Weight Category (tons)	Commodity							
	Agriculture		Food		Lumber, Wood		Other	
	No.	%	No.	%	No.	%	No.	%
<5	5	24	15	22	17	4	37	14
5 - <10	0	0	17	25	5	1	22	9
10 - <15	6	29	3	4	4	0	11	4
15 - <20	0	0	13	19	11	3	21	9
20 - <25	5	24	17	25	105	26	55	22
25 - <30	4	19	3	4	84	21	35	14
>30	1	5	1	1	182	45	64	26
Total	21	100	69	100	408	100	245	100

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

Weight Category (tons)	Road					
	SR395		SR25		SR231	
	No.	%	No.	%	No.	%
<5	0	0	0	0	0	0
5 - <10	53	8	9	17	1	1
10 - <15	31	5	1	2	1	1
15 - <20	46	7	7	13	0	0
20 - <25	163	26	9	17	17	22
25 - <30	117	18	2	4	11	14
>30	228	36	25	47	47	61
Total	638	100	53	100	77	100

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

Commodity	Truck Configuration (%)					Total Loads
	1	2	3	4	5	
Agriculture	0	24	0	60	16	22
Livestock	59	0	0	41	0	9
Propane	100	0	0	0	0	1
Rock, sand	0	29	0	34	37	59
Food	27	4	0	65	4	69
Laundry	100	0	0	0	0	1
Lumber, wood	2	10	1	44	44	408
Furniture	14	0	0	86	0	9
Pulp, paper	0	0	0	100	0	6
Chemicals	8	13	0	21	58	19
Petroleum	0	0	0	82	18	9
Glass, cement	33	0	0	39	28	20
Metal	0	7	0	76	17	34
Metal products	0	0	0	58	42	4
Machinery	13	48	0	39	0	19
Electrical	0	0	0	100	0	1
Trans. equipment	0	100	0	0	0	1
Manufacturing parts	100	0	0	0	0	2
General freight	7	33	0	52	7	16
Mail, packages	100	0	0	0	0	7
Solid waste	23	0	0	77	0	7
Recycled materials	32	0	0	30	38	4
Manuf. materials	100	0	0	0	0	2
Total	8%	12%	1%	47%	32%	744

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

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

Location	Number	Percent
By Town:		
Colville	66	7
Lewiston, ID	59	6
Spokane	247	25
Other	630	62
Total	1002	100
Wash. State carriers:	613	61