

Washington State Freight Truck Origin and Destination Study: Clallam County



EWITS Research Report Number 21-Clallam
January 1998

by

Kathleen M. Painter

in cooperation with

Kenneth L. Casavant, EWITS Project Director
Washington State University
Department of Agricultural Economics
101 Hulbert Hall
Pullman, WA 99164-6210

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:

Ken Casavant, Project Director
Department of Agricultural Economics
Washington State University
Pullman, WA 99164-6210
(509) 335-1608

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

Introduction	1
Method of Analysis	2
Presentation of Results	3
Clallam County Results	4

List of Figures

Figure 1	Washington State Highways	6
----------	---------------------------------	---

List of Tables

Table 1A	Survey Sites and Traffic Direction.....	1
Table 1	Daily Truck Traffic by Road for Each Season, Clallam County	7
Table 2	Daily Truck Traffic by City of Cargo Origin for Each Season, Clallam County	8
Table 3	Daily Truck Traffic by City of Cargo Destination for Each Season, Clallam County	11
Table 4	Truck Traffic for Trips Originating or Ending in Clallam County by Season.....	14
Table 5	Truck Trips by Commodity for Truck Traffic Originating or Ending in Clallam County	15
Table 6	Weight Category by Commodity for Truck Loads Originating or Ending in Clallam County	15
Table 7	Weight Category by Road for Truck Loads Originating or Ending in Clallam County	16
Table 8	Truck Configuration by Type of Commodity Hauled, Clallam County (%)	16
Table 9	Truckers' Home Base for Truck Trips Originating or Ending in Clallam County	17

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.

Clallam County Results

Most truck traffic in Clallam County travels on State Route 101 (SR101), ranging from 424 trips per day in summer to 679 in winter (Table 1). Lumber or wood products are the most common freight in this county, comprising approximately one-fourth of all loads across the seasons. Food products are the next most common freight, making up 15% to 35% of all loads. Agricultural products are carried on 28% of the loaded truck trips on SR101 in spring but make up only a small fraction of freight during the rest of the year.

Most cargo from Clallam County originates from the towns of Beaver, Forks, Port Angeles, and Sequim, with considerable seasonal variation (Table 2). In fall, an average of 153 trucks leave from Port Angeles, although just 67 of these trucks carry freight. Lumber or wood products and pulp or paper products make up 45% of this freight. Another 49 trucks per day leave from Sequim in the fall, carrying mainly lumber or wood products and machinery. The remaining towns in Clallam County have small numbers of trucks per day, but the average payload can be quite high. For example, an average of four loaded trucks leave Forks per day, with an average weight of 33 tons, all carrying wood or lumber products. In winter, truck traffic is much lower, with an average of 77 trucks per day from Port Angeles, 25 trucks per day from Forks, and 79 trucks per day from Sequim. Lumber or wood products are the main freight categories for trucks originating from Forks and Sequim, while freight from Port Angeles consists mainly of food products, furniture, metal products, chemicals, and machinery. In spring, 69 trucks per day originate from Port Angeles, with the majority of trucks carrying wood or lumber products and paper or pulp products. Another 57 trucks per day leave Sequim, with the largest freight categories being food products and machinery. Beaver is the source for another 17 trucks per day in spring. All of these trucks carry freight, consisting entirely of lumber or wood products, with an average payload weight of 32 tons. In summer, 116 trucks leave Port Angeles each day, but just 55% of these trucks carry freight. Over two-thirds of the loads consist of wood or lumber products and paper or pulp products. Sequim and Forks are the cities of origin for another 47 and 36 trucks per day, respectively. Agricultural products are the major freight category for trucks with freight leaving Sequim, while nearly all the trucks leaving Forks carry either wood or lumber products and paper or pulp products. Trucks leaving Forks have an average payload weight of 29 tons.

Port Angeles, Sequim, and Forks are again the major cities for truck destination in Clallam County (Table 3). Truck traffic destined for Port Angeles is higher in winter and spring, averaging around 400 trucks per day, falling to 241 and 202 trucks per day in fall and summer, respectively. Lumber or wood products and food products remain important categories, but there is more diversity of freight destined for Clallam County, including general freight, machinery, chemicals, and petroleum. In general, the average payload for freight destined for this county tends to be much lighter than freight originating from this county. The town of Forks is an exception in summer, when the average payload weight of incoming freight is 35 tons.

Total truck traffic heading for or leaving from Clallam County averages about 460 trucks per day in winter and spring and 380 and 318, respectively, for fall and summer (Table 4). Lumber or wood products is the predominant freight category, ranging from 20% of all trucks with freight in winter to 30% of all trucks with freight in summer. Food products are the next most important freight category, ranging from 14% to 21% of all loads across the seasons. Average payload weight of all trucks is fairly constant over the year at approximately 15 tons. Averaged over the year, food products comprise 12% of all loads while lumber or wood products make up 17% (Table 5). The average payload weight for these two categories is 9 and 24 tons, respectively. All other freight as a group averages 15 tons per load. Nearly all freight is hauled on SR101. SR112 is the next most common roadway, carrying 4% of food product loads and 3% of all other categories excluding lumber or wood products.

Two-third of all trucks carrying lumber or wood products weigh 20 tons or more, and one-third fall into the over 30-ton weight category (Table 6). One-third of the loads in the food products category weigh less than 5 tons, as do one-third of the loads in the remaining categories grouped together. Just 18% of all loads in categories other than lumber or wood products fall into the over 30 tons category.

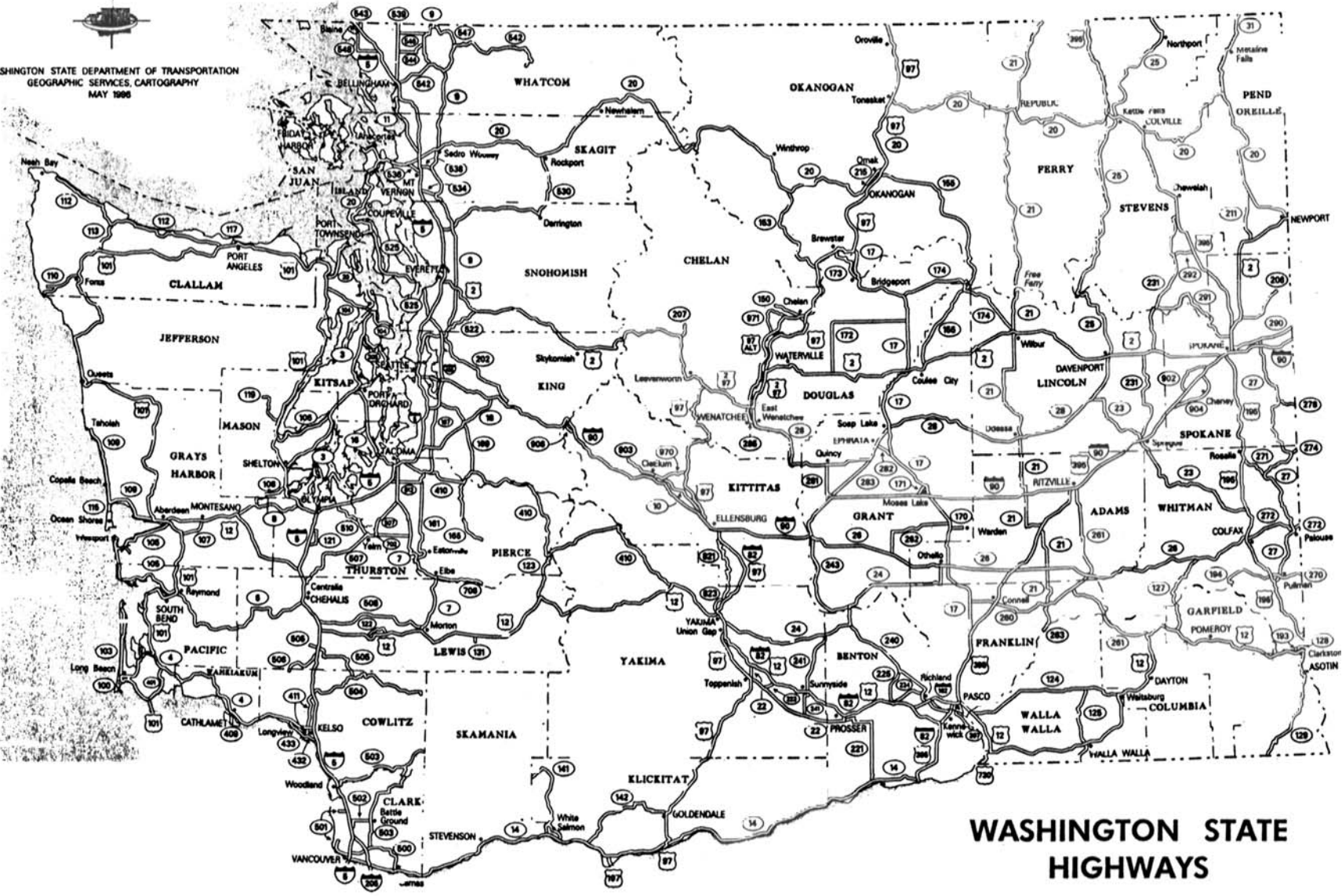
Table 7 shows weight category by roadway for truckloads originating or ending in Clallam County. Of the loaded trucks on SR101, almost one-third fall into the under 5-ton category, while 18% weigh over 30 tons. On SR112, none of the loads weigh over 25 tons, and most fall into weight categories of less than 15 tons.

Nearly 40% of the trucks carrying loads into or out of Clallam County are tractors plus one trailer (Table 8). Another 29% are straight trucks, one-fifth are trucks and trailers, and 11% are tractors plus two trailers. Of the major freight categories, lumber or wood products are carried primarily by tractors plus one trailer (47% of loads) or truck and trailer configurations (30%). Tractors carry food products plus one trailer (51%), straight trucks (32%), or trucks and trailers (15%).

Of the surveyed trucks either heading for or leaving Clallam County, 83% were Washington-based carriers (Table 9). Port Angeles was home base for 35% of the surveyed trucks. Seattle and Sequim were the next most common home bases for truckers, at 10% and 8%, respectively.



WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
GEOGRAPHIC SERVICES, CARTOGRAPHY
MAY 1996



WASHINGTON STATE HIGHWAYS

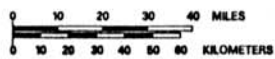


Table 1--Daily Truck Traffic by Road for Each Season, Clallam County

Season/ Road	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
SR 101	554	368	14	5,158	Food	15
					Lumber, wood	24
					Pulp, paper	6
					Petroleum	7
SR 112	20	19	8	159	Food	16
					Machinery	24
					General freight	60
Winter:						
SR 101	679	443	15	6,604	Propane	5
					Food	21
					Lumber, wood	21
					Furniture	8
					Pulp, paper	5
					General freight	7
SR 112	6	6	0	0	Empty	100
Spring:						
SR 101	581	455	16	7,081	Agriculture	28
					Food	15
					Lumber, wood	24
					Machinery	12
SR 112	27	20	11	220	Food	35
					Furniture	15
					Glass, cement	15
					Machinery	15
					Trans. equipment	15
Summer:						
SR 101	424	311	15	4,516	Food	17
					Lumber, wood	28
					Glass, cement	7
SR 112	15	9	7	67	Rock, sand	10
					Food	13
					Metal products	10
					Trans. equipment	10

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, Clallam County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:						
Beaver	16	16	25	405	Lumber, wood	36
					Petroleum	64
Carlsborg	2	2	7	11	Petroleum	100
Elwha	2	0	0	0	Empty	100
Forks	4	4	33	130	Lumber, wood	100
Jamestown	8	8	5	37	Trans. equipment	62
					General freight	38
Lost Mountain	2	2	24	36	Lumber, wood	100
Neah Bay	2	0	0	0	Empty	100
Port Angeles	153	67	11	758	Food	7
					Lumber, wood	20
					Pulp, paper	25
					Print materials	16
					Machinery	9
					General freight	8
Sequim	49	29	7	188	Lumber, wood	21
					Metal products	10
					Machinery	21
					Solid waste	10
Winter:						
Beaver	6	6	33	205	Lumber, wood	100
Forks	25	22	28	624	Lumber, wood	86
Jamestown	11	11	10	105	Metal products	67
					General freight	33

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Winter:						
Port Angeles	77	25	1	16	Food	12
					Furniture	29
					Chemicals	12
					Metal products	12
					Metal products	12
					Machinery	12
Sappho	3	3	39	122	Lumber, wood	100
Sequim	79	30	9	262	Propane	20
					Rock, sand	10
					Food	10
					Lumber, wood	20
					Glass, cement	10
					Machinery	10
					General freight	10
					Recycled materials	10
					Spring:	
Beaver	17	17	32	534	Lumber, wood	100
Carlsborg	3	0	0	0	Empty	100
Jamestown	6	6	25	153	Metal products	100
King Hill	3	0	0	0	Empty	100
Port Angeles	69	32	19	626	Lumber, wood	32
					Pulp, paper	32
					Machinery	38
Sequim	57	43	10	455	Food	23
					Metal	15
					Machinery	23

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Summer:						
Agnew	2	0	0	0	Empty	100
Carlsborg	1	1	10	7	Food	100
Clallam Bay	1	1	24	17	Lumber, wood	100
Clallam County	1	1	33	24	Lumber, wood	100
Diamond Point	1	1	0	0	Glass, cement	50
					Trans. equipment	50
Dungeness	1	0	0	0	Empty	100
Forks	36	34	29	980	Food	10
					Lumber, wood	74
					Pulp, paper	5
Port Angeles	116	64	9	551	Food	7
					Lumber, wood	51
					Pulp, paper	17
Sequim	47	35	8	286	Agriculture	28
					Rock, sand	10
					Lumber, wood	14
					Solid waste	8

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, Clallam County

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall: Forks	25	12	10	119	Lumber, wood	13
					Print materials	18
					Petroleum	13
					Metal products	18
					Machinery	13
					Electrical	13
					General freight	13
Port Angeles	241	183	15	2,789	Food	9
					Lumber, wood	28
					Chemicals	8
					General freight	9
					Food	96
Sequim	33	33	14	452	Food	96
Winter: Forks	20	12	9	111	Lumber, wood	33
					Print materials	17
					Glass, cement	25
					General freight	25
					Food	22
					Lumber, wood	18
					Furniture	10
Port Angeles	404	302	14	4,310	Pulp, paper	8
					Mail, packages	5
					Recycled materials	6
					Propane	23
					Food	47
					Machinery	6
					Sequim	50
					Food	47
					Machinery	6

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Spring:						
Forks	8	5	18	83	Machinery	100
Port Angeles	381	311	16	4,929	Food	16
					Lumber, wood	22
					Chemicals	5
					Petroleum	5
					Machinery	6
					General freight	8
Sequim	23	23	8	178	Agriculture	50
					Lumber, wood	50
Summer:						
Beaver	7	1	23	29	Lumber, wood	100
Clallam Bay	6	5	6	28	Rock, sand	15
					Food	41
					Metal	15
					Metal products	15
					Trans. equipment	15
Clallam County	1	1	1	1	Landscaping	50
					Textiles	50
Forks	6	3	35	97	Petroleum	74
Hoko River	1	0	0	0	Medical equip.	26
Jamestown	5	5	20	102	Food	85
					Glass, cement	18
Joyce	1	0	0	0	Empty	100
Lake Sutherland	1	1	6	6	Machinery	100
Lyre River	1	1	6	6	Propane	100
Neah Bay	1	1	31	31	Food	100

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

Season/ Town	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Summer: Port Angeles	202	157	15	2,384	Food	30
					Lumber, wood	19
					Furniture	5
					Glass, cement	5
Sappho	1	1	19	14	Electrical	100
Sequim	16	16	17	274	Agriculture	26
					Glass, cement	74
Twin	1	0	0	0	Empty	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 4--Truck Traffic for Trips Originating or Ending in Clallam County by Season

Season	Total Trucks Per Day (No.)	Loaded Trucks Per Day (No.)	Average Payload (Tons)	Total Tonnage ¹	Commodity	
					Category	Percent
Fall:	566	380	14	5,343	Food	14
					Lumber, wood	24
					Pulp, paper	6
					Petroleum	6
					Machinery	6
					Trans. equipment	5
					General freight	10
Winter:	698	459	15	6,845	Food	21
					Propane	5
					Lumber, wood	20
					Furniture	8
					Pulp, paper	5
					General freight	7
					Agriculture	5
Spring:	598	461	16	7,211	Food	15
					Lumber, wood	24
					Machinery	11
					General freight	5
					Agriculture	5
					Food	19
					Lumber, wood	30
Summer:	432	318	15	4,667	Pulp, paper	5
					Glass, cement	8

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 Clallam County

Commodity	Truck Trips	Total Weight		Avg. Payload (Tons)	County Roads Used	
	Per Year (%)	Tons	% of Total		Road	% of Trips
Food	12	2,549	7	9	SR101	98
					SR112	4
Lumber & wood products	17	9,223	26	24	SR101	98
					SR112	0
Other	71	23,831	67	15	SR101	97
					SR112	3

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

Weight Category (tons)	Commodity					
	Food		Lumber & Wood		Other	
	No. of Loads	% of Total	No. of Loads	% of Total	No. of Loads	% of Total
<5	87	34	59	15	296	34
5 - <10	32	12	18	5	127	15
10 - <15	25	10	12	3	56	6
15 - <20	47	18	11	3	88	10
20 - <25	56	22	78	20	80	9
25 - <30	6	2	71	19	85	10
>30	4	2	133	35	141	16
Total	257	100	382	100	873	100

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

Weight Category (tons)	Road			
	SR101		SR112	
	Number	Percent	Number	Percent
<5	434	30	11	26
5 - <10	170	12	9	21
10 - <15	93	6	16	37
15 - <20	141	10	4	9
20 - <25	204	14	3	7
25 - <30	157	11	0	0
>=30	270	18	0	0
Total	1469	100	43	100

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

Commodity	Truck Configuration (%)					Total Loads
	1	2	3	4	5	
Agricultural products	38	14	48	0	0	52
Livestock	0	0	100	0	0	7
Landscaping materials	80	20	0	0	0	7
Propane	52	11	0	37	0	30
Rock & sand	27	38	35	0	9	22
Food	32	15	51	2	8	276
Lumber & wood	10	30	47	12	0	386
Furniture	71	23	6	0	0	62
Pulp and paper	4	15	51	30	0	79
Printed material	29	0	29	42	0	24
Chemicals	39	23	29	9	0	51
Petroleum products	13	20	35	33	7	59
Rubber & plastic	58	0	42	0	0	19
Glass & cement products	26	18	14	42	41	67
Metal & metal products	67	9	24	52	4	34
Fabricated metal products	41	11	49	0	0	42
Machinery	26	34	37	4	0	92
Electrical equipment	55	17	28	0	0	22
Transportation equipment	71	13	16	0	0	37
General freight	17	33	37	14	59	100
Mail & packages	38	0	21	41	59	27
Solid waste	80	7	13	0	0	11
Recycled materials	28	4	68	57	4	33
Total	29%	21%	39%	11%	10%	1616

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 Clallam County

	Location	Number	Percent
By Town:			
	Kent	65	3
	Port Angeles	801	35
	Portland, OR	78	3
	Seattle	238	10
	Sequim	187	8
	Tacoma	84	4
	Other	841	37
	Total	2294	100
	Wash. State carriers:	1897	83