

Issues with Efficacy of FAST at the Cascade Gateway

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Web Address: www.wwu.edu/bpri

Scope of CVO Data Collection Effort June/July 2009

Ports of Entry:

Pacific Highway
Lynden/Aldergrove
Sumas/Huntingdon

Both north- and southbound data gathered at each port

Products:

Port processing data linked to commodity and to origin/destination

Database representing 4,714 truck trips, with each record containing detailed timing and path of progress through port, linked to carrier name, origin/destination of load, commodity carried, and licensing jurisdiction.

24/7 commodity data at Pacific Highway

Database representing 8,491 truck trips observed around-the-clock in a single week, with each record containing date/time of clearance, commodity carried, and origin/destination of load.

Repository:

Whatcom Council of Govts.
email wcoq@wcoq.org

Introduction. This article uses recently collected data to examine issues related to the efficacy of the FAST program at the Cascade Gateway. The data was collected by the Border Policy Research Institute (BPRI) in collaboration with the Whatcom Council of Governments (WCOG), a planning entity located in Bellingham, WA. WCOG facilitates the International Mobility and Trade Corridor (IMTC) project, which is a binational forum that seeks to improve mobility through the Cascade Gateway (i.e., the four ports-of-entry that collectively serve the I-5 corridor).

The IMTC periodically seeks to acquire data describing commercial vehicle operations (CVO) at the regional ports. To provide such data, BPRI and WCOG undertook an extensive CVO field project in the summer of 2009, complementing similar projects that were completed in 2002 and 2006. The scope of the 2009 project is shown in the left sidebar. Used in this article to study FAST, the CVO database can be used to perform many other analyses (e.g., freight mode diversions, road network design).

Characteristics of Carriers. By examining the licensing jurisdiction of the trucks traversing the Gateway, we can learn about the universe of potential clients for the FAST program and the uptake rate within that universe. The FAST program operates only at the Pacific Highway port-of-entry, so Table 1 focuses

Table 1. Traffic Stream Broken Out by Licensing Jurisdiction

Southbound only, Pacific Highway	British Columbia	Alberta	Other Canada	Washington	I-5 Corridor (CA, OR)	Other U.S.	Total	All Canadian combined	All U.S. combined
Total traffic through port	877	33	123	262	117	145	1,557	1,033	524
Jurisdiction's share of total traffic	56%	2%	8%	17%	8%	9%	100%	66%	34%
Traffic in FAST lane only	155	14	22	67	26	67	351	191	160
Share of jurisdiction's traffic using FAST	18%	42%	18%	26%	22%	46%	23%	18%	31%

Southbound			Northbound	
Standard	FAST		Standard	FAST
1,109 77%	324 23%	All Trucks Total number of trucks in sample Percentage of trucks using given lane type	1,345 98%	22 2%
448 40%	236 73%	Empty Trucks Number of empty trucks Percentage of empties in given lane's traffic stream	249 19%	9 41%
661 88%	88 12%	Loaded Trucks Number of loaded trucks Percentage of loaded trucks using given lane type	1,096 99%	13 1%
23%	14%	Commodities carried, grouped by 2-digit HS codes		
13%	17%	1 - 24: Food, beverages, agricultural commodities	25%	15%
28%	43%	25 - 40: Minerals, ores, chemicals, plastics, fuels	21%	23%
8%	2%	41 - 71: Wood, fabrics, clothing, paper products	15%	0%
18%	8%	72 - 81: Metals, metallic materials	9%	8%
9%	16%	82 - 96: Manufactured goods	27%	38%
		97 - 99: Other goods	3%	15%

Table 2. Characteristics of Pacific Highway Traffic Stream, by Direction of Travel and Lane Type

upon the southbound traffic stream through that port. As seen in the table, overall usage of the port is 34 percent American and 66 percent Canadian, with BC-licensed carriers the dominant users of the port, comprising 56 percent of the traffic. Within the group of American users, the states along the I-5 corridor (WA, OR, CA) account for about three-quarters of the traffic. Generally, little use derives from trucks based east of BC and the I-5 corridor (i.e., 19 percent for *Alberta*, *Other Canada*, and *Other U.S.* combined). With respect to the FAST lane, BC is again the dominant user, accounting for 44 percent of traffic (155 of 351 trucks). Note, though, that BC's 44 percent share of FAST traffic is significantly lower than its 56 percent share of overall traffic. As shown in the bottom row of the table, BC carriers make proportionally less use of FAST, compared to carriers based elsewhere. An enrollment campaign specifically targeted at BC carriers might improve efficacy of the FAST program at the Cascade Gateway.

Characteristics of Shipments. Table 2 provides information about loads that cross the border. Again, to focus upon FAST, the table is specific to the Pacific Highway port. One striking fact is the extremely low usage of FAST in the northbound direction—just 2 percent of trucks.¹ Equally striking is the dominant use of FAST by empty trucks. 73 percent of southbound FAST traffic is empties, as is 41 percent of northbound traffic. For a given truck trip to make use of FAST, the driver, carrier, and shipper must all be enrolled in the program, and enrollment can be a complicated and costly process. Because there is no shipper associated with an empty truck, usage of FAST by that truck then depends only upon the carrier and driver. There is typically a stable association between those two entities, and the vetting and security requirements mandated by FAST are arguably simpler to implement by the two, so there is some incentive for carrier and driver to enroll. The truck can have expedited passage through the port for at least the empty leg of a trip.

1. Low usage has led to the recent initiation of a dialogue to explore alternative uses of the northbound FAST lane.

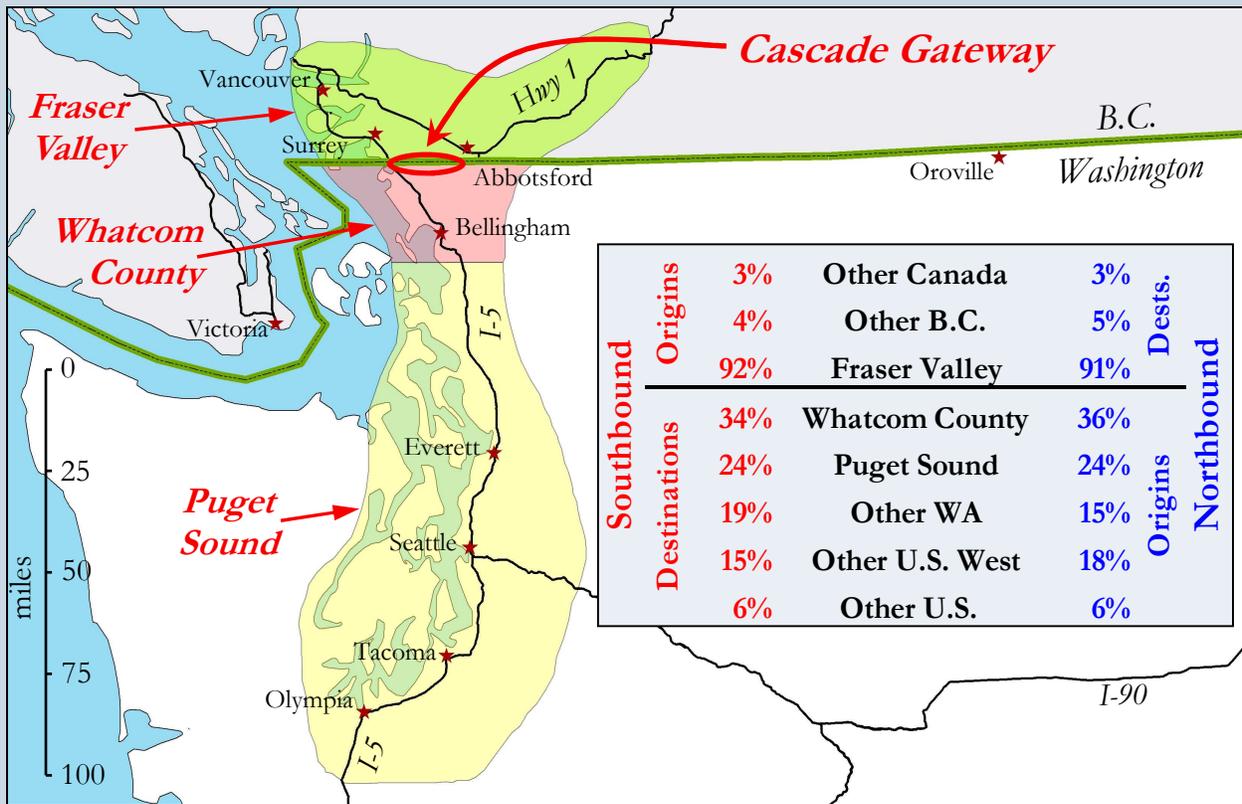


Figure 1. Origins and Destinations of Trucks Passing Through the Cascade Gateway

The bottom of Table 2 is specific to the universe of *loaded* trucks crossing the border. FAST usage is low, comprising just 12 percent of southbound trucks and 1 percent of northbound. The final six rows of the table show profiles of what kinds of commodities comprise the loads within each type of lane. In each column, the six values sum to 100 percent. For example, in the left column (standard lane, southbound), of the 661 loaded trucks, 18 percent carried manufactured goods, 8 percent carried metals, etc. As discussed in a prior article,² and as evident in the data for the standard lanes, there are differences between the profiles of the goods traveling north (i.e., relatively greater proportion of manufactured goods, chemicals, plastics, fuels) and those traveling south (wood and paper products). With regard to the southbound direction, significant usage of FAST is apparent only for the commodity group related to wood and paper products (HS codes 41-71). No meaningful conclusion can be reached for the northbound direction, as only 13 trucks are included in the sample. While there are well-understood issues regarding the problem of accommodating agricultural commodities within the FAST paradigm (i.e., difficulty of “securing” a farm field), FAST has been well suited to certain kinds of commodities in other regions (e.g., manufactured goods, metals, ores), and Table 2 shows that those commodities comprise a significant portion of regional trade. FAST usage might be bolstered by marketing targeted at shippers of those commodities.

As an aside, the large number of empty trucks traversing the border is at odds with emerging national policies aimed at greenhouse gas reduction. Overall, 48 percent of southbound trucks are empty, as are 19 percent of northbound. The repeal of cabotage regulations would obviously lead to a greater ability to arrange backhauls in the cross-border setting.

Characteristics of Trip Endpoints. Figure 1 portrays the origins and destinations of trucks that traverse the Cascade Gateway, mapped by proximity to the border. In the figure, “Fraser Valley” is

2. See p. 4 of Border Policy Brief, Winter 2009 edition, Vol. 4, No. 1, which can be retrieved at www.wvu.edu/bpri

	Southbound			Northbound		
	Pacific Highway		Sumas	Pacific Highway		Sumas
	Standard	FAST	Standard	Standard	FAST	Standard
2002	57	-	-	49	-	-
2006	120	87	-	64	-	-
*2009	95	69	49	73	68	112

* Preliminary estimates derived by subtracting a correction factor from actual measurements, in order to remove distortions caused by the presence of our surveyors.

Table 3. Length of Inspection Process at Booth (sec.)

the term used to identify the Lower Mainland of BC, which encompasses Vancouver and a group of nearby cities that are home to 2.4 million people. As seen in the inset table, over 90 percent of cross-border trips originate in or are destined for the Fraser Valley, all of which lies within 40 miles of the border. South of the border, trip endpoints are most prevalent in Whatcom County, immediately abutting the border, and become less common in proportion to distance from the border. About 60 percent of trips are entirely contained within a 175-mile-long swath centered upon I-5 that encompasses the Fraser Valley, Whatcom County, and Puget Sound. An additional 20 percent do not extend beyond Washington State. Although Figure 1 maps the pattern of standard-lane traffic, the pattern for FAST traffic is similarly concentrated—e.g., 98 percent of FAST trip endpoints in Canada lie within the Fraser Valley. This tight geographic concentration of shippers seemingly would be conducive to the efficiency of any program designed to facilitate enrollment in FAST.

Inspection Processes. The length of the process that occurs at the inspection booth is key to the rapid movement of trucks through a port. Table 3 shows regional data at three points in time, all falling in the post-9/11 era. In 2002, FAST did not exist, and standard truck inspections (both north- and southbound) were accomplished in less than 60 seconds. The inspection process became lengthier (again, both north- and southbound) between 2002 and 2006, despite the implementation of FAST, but at least a FAST inspection was more rapid than a standard one. In the southbound direction, inspection processes have become more rapid since 2006 in both the FAST and standard lanes. The “e-manifest” program implemented by U.S. Customs in 2008 is likely responsible for the change. Under e-manifest, all paperwork related to a truck must be electronically filed with Customs at least one hour prior to its arrival at the border. This allows agents to conduct pre-screening and to direct attention to trucks and/or loads believed to pose a risk. In the northbound direction, the inspection process appears to be little changed since 2006 (no Canadian equivalent to e-manifest was deployed), and there appears to be little difference between FAST and standard inspections. Interestingly, the most rapid inspections occur southbound at Sumas, a port with no FAST lane. A comparative review of the processes used at Sumas and at Pacific Highway might provide insights that could be of widespread benefit.

SUMMARY OF POLICY IMPLICATIONS:

- BC’s Fraser Valley is a compact region that is home to the majority of the carriers engaged in cross-border trips and that contains over 90 percent of the endpoints associated with such trips. FAST marketing could be targeted to carriers and shippers in that region. The geographic concentration of carriers and shippers would be conducive to the efficiency of any program designed to facilitate enrollment in FAST.
- Empty trucks are a major component of the traffic stream (i.e., 48 percent of southbound traffic). The repeal of cabotage regulations would facilitate acquisition of backhauls and thus help “green the border.”
- The e-manifest program introduced by U.S. Customs in 2008 is likely responsible for an improvement in the speed of the southbound inspection process (both FAST lane and standard) at Pacific Highway. However, standard-lane inspections at Sumas are the fastest in the region. A comparative review of the processes used at Sumas and at Pacific Highway might provide insights that could be of widespread benefit.