Big Rig, Short Haul

A Study of Port Truckers in Seattle
Acknowledgements

Many individuals who work in the freight movement system provided information to help us understand how the system works, the role of truck drivers, their working conditions, and their concerns.

Our thanks to all of the drivers, trucking company representatives, and others we interviewed. We are grateful for the insights and information shared with us.

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Any errors in this report are the responsibility of Port Jobs.

*Port Jobs* is a non-profit action tank working to increase access to living wage jobs for all residents of the Greater Seattle area. We foster a more vibrant and equitable economy throughout King County.

We engage in innovative research to develop practical, targeted programs that make good jobs easier to get and good employees easier to find in areas such as airport employment, transportation-to-work, and the skilled trades.

For more information, visit the Port Jobs’ website: [www.portjobs.org](http://www.portjobs.org).

Cover Photo by Don Wilson, Courtesy of Port of Seattle
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“You need trucks to move things, and this isn’t a very attractive industry. If volume grows like they say, how are we going to move it?”

-Trucking company representative
EXECUTIVE SUMMARY

If your image of truck driving is of an eighteen-wheeler speeding down America’s wide-open highways, think again. Since the heyday of CB radios and the popular radio song “Convoy,” interstate commerce has been deregulated, and a global explosion of intermodal freight has changed the way goods move around the world. Economic fundamentals of the trucking industry have changed, and along with them the composition of the truck driving workforce. Short-haul truckers based at America’s ports now make up a large and growing portion of the country’s truck driving workforce.

The volume of cargo moving through Puget Sound ports makes truck drivers critical to the Seattle area economy. One quarter of Washington jobs are tied to international trade. In 2005, both the Port of Seattle and the Port of Tacoma joined an elite group of global ports that handle more than two million cargo containers per year.¹ Both the amount of freight moving through Puget Sound ports and the number of trucks on the roads are expected to increase into the foreseeable future.

Truck drivers are a critical link in the international freight distribution system. A single ocean liner may move several thousand containers from Shanghai to Seattle. A single train may carry several hundred double-stacked containers from Seattle to Chicago. Each of those containers requires a truck and a driver to move between the Port of Seattle terminals and the railyard. Stakeholders reported that in recent years, during the high shipping season of July to October, these drivers have been in short supply.

“We need to get truck drivers who are here for the long term.”

-Railroad company representative

Seasonal driver shortages have been compounded by attrition in the workforce. In some cities, work slowdowns or walkouts have occurred. Within the past ten years, West Coast shippers have begun to experience delays in the movement of goods, in part because trucking companies could not find enough drivers during periods of high demand. Trade publications began openly discussing driver shortages and pay rates.

While truck driving used to be a fairly lucrative field, where workers with limited education and training could earn middle-class wages and benefits, conditions have shifted dramatically over the last 25 years.

We undertook this study to determine whether there will be enough drivers to meet

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¹ Data provided by the Port of Seattle and Port of Tacoma websites. See Bibliography for full addresses.
labor demand in the future, whether port-related truck driving jobs are a viable opportunity for local workers, and to assess the training needs in this industry.

“I like the freedom of being my own boss.”
-Owner-operator

Research Design

We interviewed nineteen company stakeholders in the freight system, including representatives of trucking companies, terminal operators, steamship lines, railroads, and freight brokers; Port of Seattle officials; and local leaders of both the Teamsters and the International Longshore Workers Union (ILWU). We also interviewed nine short-haul owner-operators. In order to maintain confidentiality, we do not attribute specific statements and quotes to specific individuals in this report.

We also distributed a survey to 277 truckers at the Port of Seattle, with a response rate of 60%. The Port Jobs survey was based on a survey developed and administered by Kristen Monaco and Lisa Grobar of the Department of Economics at California State University, Long Beach, A Study of Drayage at the Ports of Los Angeles and Long Beach.

Drivers were asked to identify themselves as primarily driving: Short-haul (to railheads), Delivery in Washington State, Delivery in the Seattle area, or Over-the-Road (long-haul). Following Monaco and Grobar’s methodology, all drivers who did not select Over-the-Road (long-haul) were grouped together as short-haul truck drivers. This gave us a total of 147 short-haul drivers. Unless otherwise indicated, all survey data in this report refers to those short-haul drivers.

Many respondents did not answer every question. In reporting the data for each question, we gave the percent of those who answered the question. For example, of the 147 short-haul drivers who completed a survey, 136 identified their race/ethnicity. Of those, 71 were white. Therefore, we reported that 52% of respondents were white. For more information on the survey methodology, see Appendix 3, Survey Results.

Demographic Findings

Our survey found that the average short-haul driver working at the Port of Seattle is an
owner-operator who works eleven hours a day and earns $31,341 per year. He has no health benefits or retirement plan. He is 43 years old, married with children, has been working as a truck driver for five years, and he’s seriously thinking about getting into some other line of work. He drives an eleven-year-old rig, and does not earn enough to purchase a newer truck or retrofit his current truck to decrease emissions and increase safety.

Fifty-two percent of drivers surveyed are white, 54% were born outside of the U.S. Forty-four percent of drivers speak a language other than English at home.  

**Key Findings**

Port Jobs identified several key issues, which fall into three broad areas: economic, environmental and safety, and social.

**Economic Findings**

1. **Earnings are low and vary widely.** Driver income varies based upon such factors as type of work (e.g., trips to railhead versus longer haul), employment status (owner-operator versus employee), tenure in the industry, and race.

2. **Demand for drivers varies seasonally and according to the unpredictable flow of cargo.** In the slow season, there may not be enough work for the drivers; in the high season, there may not be enough drivers for the work.

3. **The unpredictable flow of cargo, terminal slowdowns, and road congestion** are all barriers to efficient freight mobility and increased driver earnings.

   “It's much easier to get goods to Seattle from Qingdao than it is to get them from Seattle to Woodinville.”

   - Freight company representative

**Environmental/Safety Findings**

1. **Truck-related pollution** is growing as cargo volume increases.

2. **The cost of buying new trucks and retrofitting old trucks** is prohibitive for most local short-haul drivers.

3. **Federal CDL** regulations do not require on-the-road training. This omission creates a major safety concern.

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4 When reporting annual earnings, owner-operators were asked to subtract all truck-related expenses.
5 The survey was administered in English, and may undercount the number of foreign-born drivers. Drivers with more limited English skills and/or less experience with American-style surveys may have been less likely to complete the survey. Other data findings and limitations to the survey are discussed in detail in Appendix 3, Survey Results.

6 Commercial Drivers License. See Glossary.
for trucking companies, insurance companies, and drivers.

4. Federal driver ‘hours of service’ rules limit truckers to 11 hours of driving after ten hours off, and 14 hours total of work per day. The rules do not allow drivers to clock in and out for breaks.

5. Terminal rules and regulations differ widely, so that drivers must learn a variety of routes, numbering systems and speed limits. Despite terminal operators’ efforts to share information and maps with drivers, changes in terminal layouts and procedures are not always clear. This results in truckers losing time as they search for the right lines and containers, and longshore workers getting frustrated with drivers who are in the wrong places.

Findings related to Social Issues

1. Conflict between short-haul truck drivers and longshore workers negatively affects working conditions at the terminal. This conflict is due to differences between the two workforces, including race, country of birth, and language; different pay structures (truckers are primarily paid by the trip and longshore workers are paid by the hour); and employee status (truckers are largely independent owner-operators while longshore workers are union members).

2. A large number of short-haul drivers speak English as a second language. New technologies in terminal operations, including radios, speaker boxes, and headsets, can distort voices and contribute to communication problems.

3. Most short-haul drivers work as independent owner-operators and do not have a centralized organization to represent their interests and facilitate communication between them and terminal officials.
The Report Structure

This report begins with a description of the system that moves freight into and out of the Port of Seattle, with an emphasis on the role of commercial trucks and drivers. The next section discusses trucking in general, including the types of trucking jobs, business management and other skills required, and the local trucking industry. We then discuss our survey findings including the demographics of port truck drivers.

Major findings and analysis follow, with a final section offering recommendations that could benefit short-haul drivers in the Seattle area while improving the region’s freight movement industry as a whole.

In the back of the report is a glossary with trucking-related terms and acronyms, as well as appendices listing trucking and shipping-related organizations, commercial drivers license information, a summary of issues related to organizing, a copy of the survey questions, and a compendium of the survey results.

Recommendations

This report concludes with a series of recommendations that are intended to improve the earnings and working conditions of short-haul truckers, while strengthening the freight movement system overall. We make the following six priority recommendations:

1. Develop training programs for owner-operators;
2. Create alternative financing mechanisms to help drivers purchase new trucks and retrofit old trucks to lower emissions and increase gas mileage;
3. Begin to address working relationships between truck drivers and longshore workers;
4. Explore the creation of a drivers’ association which could, for example, lead to improved healthcare coverage and better communications;
5. Address apparent seasonal driver shortages; and
6. Reassess rates paid to trucking companies and to drivers for container deliveries within the Seattle area, in light of the findings in this study.
Figure 1. The Intermodal Freight System

Goods are ordered from a factory

Goods are loaded into containers for transport

Containers are transported across the ocean via ship

Containers are unloaded from ship by longshoremen

Contracting can be done directly or through a freight broker

Trucks carry containers to:

- Railroads for shipment inland (drayage)*
- Vendor
- Warehouses for storage

Containers are loaded onto semi-trucks*

* Photos marked with an * are by Don Wilson, Courtesy of the Port of Seattle
**THE INTERMODAL FREIGHT SYSTEM**

“Intermodalism means there are three, four, five segments to anything out here. If all those pieces don’t work, you’re not going to be effective, not going to be efficient, not going to be profitable.”

-Railroad company representative

The Port of Seattle is a major center for an international trade system that supports much of the Washington economy. The value of goods transported on Washington’s highways in 2002-03 was almost $630 billion. The Washington Public Ports Association estimates that one in four jobs in the state is tied to international trade.

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The current intermodal system that moves cargo through the Port of Seattle is complex; a basic description of the inbound process is depicted in Figure 1.

A company importing goods manufactured in, for example, China will hire a steamship line to ship the goods in an intermodal container across the ocean. That ship also will carry thousands of other containers being transported for other companies. Many importers hire freight brokers to handle all the arrangements, which may include all customs and shipping paperwork.

Most freight that is to be transported farther inland will be moved by railroad. A short-haul driver will deliver it the short distance from the port terminal to the railhead.

If the freight is to go to a warehouse within Washington, a trucking company will move the container by truck. Intermodal containers usually are not emptied until they arrive at their final destination.

When the containerized system of intermodal shipping was first developed, drayage from the port to railhead was generally provided by trucking companies that were subsidiaries of the railroads. The subsidiary company provided the vehicles and the drivers; most drivers were represented by Teamsters. Since the deregulation of interstate commerce began...
in 1980, this work has shifted to owner-operators working on contract to independent trucking companies. Owner-operators also handle deliveries to warehouses and retailers in the Puget Sound region and across the state.

In this system, the Port of Seattle plays the roles of both landlord and economic development agency. The Port owns the marine terminals and the land where they are located, which it leases to terminal operators who run all the operations. The Port also invests in infrastructure improvements, such as improved terminal access technology, that will benefit everyone in the system as well as the larger regional economy.

Together, the Ports of Seattle and Tacoma are the third largest container load center in the U.S., behind Los Angeles/Long Beach and New York/New Jersey. In 2005, the two Puget Sound ports handled a combined total of nearly 41 million metric tons of cargo. That year, both the Port of Seattle and the Port of Tacoma joined an elite club of global ports handling more than 2 million TEUs of cargo per year. Clearly, Washington’s volume of freight movement by truck is significant, and continued growth is projected. An estimated 970,000 trucks traveled through the Puget Sound region in 2002, resulting in 2,200 port-related trips per day. The number of trucks in Puget Sound is expected to grow to 1.75 million in 2025, resulting in a corresponding increase in demand for drivers.

### Cost of shipping intermodal freight

How much does it cost to ship an intermodal container through the Port of Seattle? That depends on many factors, including the amount being shipped, the origin and destination, the number of TEUs available at both ends, and the contractors, such as freight brokers, who may be involved. Table 1 shows estimates of sample rates for shipping a single container between various locations, broken down by what a shipper would be charged for each leg of the journey.

Several stakeholders reported that the truck-driving segment earns the slimmest profit margins of any portion of this system. Drivers

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15 Data provided by the Port of Seattle and Port of Tacoma websites. See Bibliography for full web addresses.
are generally paid by the trip or by the mile, and the amount paid to drivers by trucking companies varies.

One company stakeholder reported that a “rule of thumb” in the industry is that the driver earns 75% and the trucking company keeps 25%.

This percentage is consistent with reports we received from owner-operators.

We explore truck driver earnings and expenses in more detail in the following sections.

<table>
<thead>
<tr>
<th>Table 1. The Cost of Shipping a Container</th>
</tr>
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<tbody>
<tr>
<td><strong>Shanghai, China port to Kent, WA warehouse</strong></td>
</tr>
<tr>
<td><strong>Shipping Company</strong></td>
</tr>
<tr>
<td><strong>Trucking Company</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<tr>
<td><strong>Hong Kong port to Chicago warehouse</strong></td>
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<tr>
<td><strong>Shipping Company</strong></td>
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<tr>
<td><strong>Railroad</strong></td>
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<tr>
<td><strong>Trucking Company</strong></td>
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<tr>
<td><strong>Total</strong></td>
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<tr>
<td><strong>Haifa, Israel port to Seattle warehouse</strong></td>
</tr>
<tr>
<td><strong>Shipping Company</strong></td>
</tr>
<tr>
<td><strong>Trucking Company</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
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19 Drayage from Seattle port to Seattle rail yard is included; however, our source did not break out the cost of drayage.
OWNER-OPERATOR PROFILE: DESTA*

Desta is a short-haul owner-operator who has been driving a truck for two years, since completing the CDL program at South Seattle Community College (SCCC). He bought his first bobtail just a month after graduating, tapping his own savings and borrowing money from friends to pay $9,000 in cash for the 1992 model cab.

Desta does short-haul trips from the Port of Seattle to warehouses in the Seattle-Tacoma area. He is under contract with a company that has about twenty drivers. An average day at work is three to four return trips, and his gross earnings can range from $100 to $1,000 a day. Work days run as long as sixteen hours or more during the pre-Christmas high season. Last year Desta netted about $40,000 after taxes, fees, and business expenses on gross earnings of $78,000.

Before he was a truck driver Desta was a delivery driver for one of the airlines at Sea-Tac. He prefers truck driving, as the pay is much better. A cousin with his own big rig has suggested that he get into long-haul trucking, but Desta says "long-haul truckers don't have a life."

Desta is an immigrant from Ethiopia, and the Seattle Central Community College’s CDL training program provided help to him and other students with English. This program also teaches students how to do some of their own basic truck maintenance, such as clutch and brake adjustment, which helps Desta keep costs down.

The other drivers at his company help each other out, Desta says, radioing about road conditions and collecting money to help fellow drivers. "We are like friends. We are like cousins. We help each other." He likes helping his fellow workers, and he has taught some of them how to drive a truck, talk on the radio, do a pre-trip safety inspection, and park between containers.

According to Desta, the toughest skill for a truck driver to master is backing up and the hardest thing about being a truck driver is not knowing when there will be work. Desta wants to supplement his income by starting a town car service to run during the cruise season, which is counter-cyclical to the high demand season for truck drivers.

*Not his real name.
Types of trucking jobs

There are three basic categories of truck driving jobs. The first includes drivers who are hired by companies to make local deliveries. These drivers work for companies such as Frito-Lay or UPS, and they are paid on an hourly basis. Often, these drivers are represented by the Teamsters Union. These jobs tend to involve a regular paycheck with benefits and do not typically require overnight trips.

The second category is those drivers who are hired directly by trucking companies such as J.B. Hunt, ABF Freight System, or Schneider National, to drive big rigs locally or over long distances. Thirty-one percent of the drivers we surveyed were direct employees of a motor trucking company. About half of them were being paid per hour, and half were paid per trip. Most were not covered by union contract. Companies may provide benefits such as performance-related bonuses, health insurance, paid leave, and vacation time.

The third category is drivers who buy or lease their own rigs and work on contract to trucking companies. These are known as owner-operators, and they may be long or short-haul drivers.

This study focuses primarily on short-haul drivers, with an emphasis on owner-operators.

Generally, long-haul owner-operators are paid on a per-mile basis. Short-haul owner-operators tend to be paid per trip. Under federal and state labor law as well as IRS rules, these drivers are treated as independent business people and not as employees of the companies who contract with them.

Owner-operator contracts with trucking companies generally run for one year, although both the drivers and companies report that contracts are often broken. Many short-haul drivers move from one company to the next, looking for better pay rates.

The number of truck drivers in the U.S. who are owner-operators is unknown. State and federal agencies that collect labor market data lump owner-operators together with other small business people, not with employee truck drivers. The Owner-Operator Independent Drivers Association (OOIDA) estimates that there are 390,000 owner-operators in the U.S., driving a total of 545,000 owner-operator trucks.

With respect to port drivers, the Teamsters Union estimates that there are 40,000 truckers working at ports around the country. The percentage of these drivers who are owner-operators is unknown.

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21 http://www.teamster.org/02news/nr_020627_5.htm
operators varies. Sixty percent of respondents to Port Jobs’ survey identified themselves as owner-operators while Monaco and Grobar’s study at the Ports of Los Angeles/Long Beach found that 87% of respondents were owner-operators.

**Business costs**

Many, perhaps most, owner-operators begin without any training in how to run a business and keep themselves afloat financially. When a new owner-operator sets up shop, he becomes a small business owner, responsible for not only the truck loan and maintenance costs, but also a host of taxes and fees. While CDL programs teach students how to operate a vehicle and comply with state and federal laws on ‘hours of service’ and paperwork, business management training is not part of these programs.

An owner-operator must either buy or lease the truck that he drives. There are several categories of vehicles available, and owner-operators select them based on the type of driving they do. A driver can buy just a “bobtail,” or a tractor and trailer/chassis combination.23

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22 The *bobtail* is the driver compartment and engine of the truck that pulls the trailer or chassis; it is also referred to as the *power unit, cab, or tractor*. See Glossary.

23 In general, local short-haul drivers need nothing more than a basic cab without a sleeper. Drivers who do longer runs within the Pacific Northwest and long-haul drivers often invest in sleeper cabs that allow them to save on overnight expenses.

A used conventional bobtail (without a trailer) can cost anywhere from $6,000 to $80,000, while a new one can run well over $100,000. Many older trucks have mechanical problems, resulting in high maintenance costs. Used trailers cost between $1,500 and $15,000.

A good set of ten tires for a standard three-axle truck can cost $3,000. Service by a diesel mechanic runs $60-100 per hour, and one driver reported a $480 minimum cost for mechanical service. An owner-operator must pay all of these expenses out of pocket. Several drivers reported that they do at least some of their own mechanical work, and help other drivers out as well.

The drivers we interviewed reported the “rule of thumb” is to estimate that half of an owner-operator’s gross earnings will go towards expenses. Fixed expenses for owner-operators can include the following:

- Tractor/bobtail payment,
- Trailer payment,
- Licensing and permits,
- Federal highway use tax,
- Collision/physical damage insurance,
- Bobtail insurance,
- Liability/cargo insurance,
- Workers compensation, and
- Fixed office costs (e.g., rent, if applicable).
Variable expenses can include the following:

- Fuel, fuel fees and taxes,
- Road taxes,
- Routine servicing/on-road oil,
- Maintenance, repairs, and tires, tolls, scales, unloading and other on-road costs,
- Health, life, and disability insurance,
- Office, legal, & accounting expenses, and
- Communication costs (telephone, pager, and internet access).

Two of the drivers we interviewed gave us a detailed breakdown of their annual expenses, shown in Table 2. These figures do not include the cost of diesel fuel, which drivers also must pay out of pocket.

### Table 2. Sample Annual Driver Costs

<table>
<thead>
<tr>
<th></th>
<th>Driver 1</th>
<th>Driver 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loan payment</td>
<td>$11,760</td>
<td>$4,800</td>
</tr>
<tr>
<td>Bobtail insurance</td>
<td>$7,800</td>
<td>$7,000</td>
</tr>
<tr>
<td>Self-employment tax</td>
<td>$4,000</td>
<td>$17,000</td>
</tr>
<tr>
<td>Licensing/registration</td>
<td>$5,090</td>
<td>$4,608</td>
</tr>
<tr>
<td>Maintenance</td>
<td>$10,000</td>
<td>$16,000</td>
</tr>
<tr>
<td>Health insurance</td>
<td>None</td>
<td>$5,100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$38,650</strong></td>
<td><strong>$54,508</strong></td>
</tr>
</tbody>
</table>

### Skills required

A truck driver needs to have many skills, including knowing how to operate a large gas or diesel vehicle safely. Other necessary skills include business management, communication over radios and electronic devices, customer service, technology, and truck maintenance.

### Driving

A CDL is required in order to drive a big rig. There are several classes of CDLs based on the type of truck being driven, and there are additional endorsements for carrying specialized loads, such as hazardous materials. Appendix 5 provides the requirements for getting a CDL, as well as some history and the context of CDLs nationally.

CDL training is available at community colleges or private training organizations. Some businesses and public agencies that hire drivers will train them as part of their employment contracts. Training may range from a couple of weeks with a private provider, to several months at a community college. In 2004, the Federal Motor Carrier Safety Administration issued highly controversial rules for CDL training, which set a minimum requirement of ten hours of training, but does not require any driving hours.

Many truckers learn to drive from friends or family. Only 62% of the short-haul drivers we surveyed reported attending any kind of formal truck driver training. Of those, 26% reported attending a community college program.
“It's fairly easy to get a CDL license, but pulling a 20-30 ton rig requires practical driving skills. Many new drivers have very little experience behind the wheel.”
-Labor representative

**Business management**

An owner-operator must have the skills required to operate a small business. This includes financial management and some basic bookkeeping. An owner-operator must manage regular payments required for the vehicle financing, the cost of upkeep and repair, and payment of taxes, while earning an irregular, unpredictable income.

An owner-operator is also responsible for complying with all federal, state, and local laws concerning business registration and applicable taxes. Sales and negotiation skills are also needed in order to sell services to trucking companies.

Successful owner-operators who are able to manage the finances of the business can purchase or lease additional vehicles and subcontract with other drivers. Often, friends or family drive for them. This can be a lucrative business for the owner-operator. These very small fleet companies (fewer than five drivers) generally subcontract to larger trucking companies. Most do not have the capacity to contract directly with shipping lines or freight forwarders. Nine percent of short-haul drivers we surveyed reported that they drive for another owner-operator.

**Communications Technology**

Drivers use radios or cell phones to maintain contact with dispatchers and to secure additional jobs. As the use of this technology increases, the ability to communicate clearly over radios and speakers has become increasingly important. As drivers enter the terminals, they may be required to talk into a speaker to communicate with a longshore clerk via a remote camera and microphone system. And, as will be discussed in our *Findings and Analysis* section, communication between truck drivers and longshore workers is a major issue of concern for many in this industry.

**Customer service**

“Our drivers represent us to the customer, so we need them to have polish and a good presentation. Our agreements are strict regarding turnaround times and dress code.”
-Freight company representative

Truck drivers may have more face-to-face contact with customers than other staff at the freight broker and trucking companies. Drivers with regular schedules may deliver to
the same companies repeatedly. Therefore, truck drivers need basic customer service skills. That includes soft skills like punctuality, and having a clean, professional appearance. Some trucking companies that receive complaints about particular drivers have been known to fire them or cancel their contracts.

**Maintenance**

Truck maintenance and repair skills are extremely important for an owner-operator, because at $60 to $100 per hour, the cost of diesel mechanic service can cut into earnings quickly. At a minimum, an owner-operator should be able to adjust the brakes and the clutch, and to conduct regular inspections to identify problems before they lead to costly breakdowns. A higher level of mechanical skills means an owner-operator will save more money. One driver, who does much of his own work, told us his $16,000 annual maintenance costs the previous year would have doubled if he had taken his rig to the shop every time he needed service.

**The local trucking industry**

The trucking industry is dominated by small companies: ninety-two percent of those Port Jobs surveyed drive for a company with fewer than 100 drivers.

There is intense competition between these companies and profit margins are slim. Profits are earned on volume. Larger companies with more formal contracts and pay scales say that they to try to maintain a floor on rates, but smaller businesses with just a few drivers might accept lower rates in order to land business.

One trucking company representative reported that his company tries to avoid contracting with very small fleet companies (with fewer than five drivers) because narrow profit margins mean that the company owner may be shortchanging his drivers in order to turn a profit. Another reported that his company prefers to deal directly with larger companies because small fleets do not have enough drivers and trucks.

Trucking companies also report that they often have problems with customers who do not want to pay for additional services. For example, when a truck driver arrives at the warehouse with his delivery and is asked to help unload it, the trucking company will ask the client to pay for the driver’s time. At other times, a driver picks up a container and tries to deliver it, only to find out that the paperwork has not been completed properly. The container must then be returned to the terminal, or the driver must wait while the client sorts out the paperwork. Most customers pay for the additional time, but some refuse, leaving the trucking company to decide how much time and effort to spend trying to recoup costs.
**OWNER-OPERATOR PROFILE: ISMAIL**

Ismail is an owner-operator who has driven for a living for six years, with four different companies. He has a 15-year-old bobtail with 800,000 miles on it, which he purchased from a long-haul driver for $8,000. He paid half up front and made payments on the rest. He works on average twelve hours per day; if it is busy, he works seven days a week. April through December are the high months. During the slow season, he is lucky to work three days a week, earning just enough to feed his family.

Ismail notes that the pay rate per move is “the same as it was four years ago.” If he grosses $60,000 per year, he will net about $30,000 after expenses. Ismail pays about $14,000 in truck maintenance; he is not a skilled mechanic, so he must pay out of pocket for labor. He wishes he had been educated about the finances of trucking, how to start out, average pay, and company practices prior to becoming an owner-operator.

With respect to slow turnaround times at the terminals, Ismail thinks that having the option of “night work (as in the PierPass Model) would be good, because there is less traffic.” The best part of trucking, for Ismail, is the independence and flexibility. The worst is the stress. His experience has been that “companies hire immigrants because they work hard and do whatever you tell them to do.”

Seniority and job security, in Ismail’s experience as an owner-operator, are non-existent. He believes that immigrants and whites must work together to solve problems. Ismail would tell a new driver to work as an employee, not an owner-operator. He is not sure what else he would do if he weren’t a trucker, but he will re-evaluate in a year. If he is still unable to make a decent living, he will quit, possibly to become a tow-truck driver.

* Not his real name
PORT TRUCKERS IN SEATTLE

Who are the port truckers in Seattle? Our survey found that the average short-haul driver is an owner-operator who works eleven hours a day and earns $31,341 per year. He has no health benefits or retirement plan. He is 43 years old, married with children, has been working as a truck driver for five years, and he’s seriously thinking about getting into some other line of work. He is driving an eleven-year-old rig, and not earning enough to purchase a newer truck or retrofit his current truck to decrease polluting emissions and increase safety. See Table 3 for more demographical data.

Table 3.
Demographics of Survey Respondents

<table>
<thead>
<tr>
<th>Gender (N=142)</th>
<th>Male (n=135)</th>
<th>95%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female (n=7)</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race/ethnicity (N=136)</th>
<th>White (n=71)</th>
<th>52%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>African/African-American (n=34)</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>Asian/Asian-American (n=13)</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Hispanic/Latino (n=7)</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>Native American (n=4)</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Mixed Race/Other (n=7)</td>
<td>5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country of Birth (N=140)</th>
<th>Foreign Born (n=75)</th>
<th>54%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US Born (n=65)</td>
<td>46%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education (N=140)</th>
<th>Did not finish high school (n=26)</th>
<th>19%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High School graduate (n=39)</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>Vocational/Technical school (n=20)</td>
<td>14%</td>
</tr>
<tr>
<td></td>
<td>Some college (n=31)</td>
<td>22%</td>
</tr>
<tr>
<td></td>
<td>Associate's degree (n=7)</td>
<td>5%</td>
</tr>
<tr>
<td></td>
<td>College/graduate degree (n=17)</td>
<td>12%</td>
</tr>
</tbody>
</table>

24 N= the number of respondents who answered the question, n= the number of respondents who chose a particular response.
Additionally, our survey found that of respondents:

- 73% are married or live with a partner.
- 72% have children.
- Forty-four percent speak a language other than English at home. Among those respondents who spoke a language other than English at home, nineteen different languages were listed. The most common were Punjabi, Amharic, Spanish, and Tigrinya.\(^{25}\)
- The typical driver is 43 years old. The youngest is 21, and the oldest, 67.

**What type of driving did respondents do?**

Sixty percent of survey respondents are owner-operators and 31% work as direct employees of trucking companies. The final nine percent reported driving for an owner-operator.

Twenty-four percent of respondents drive primarily drayage, between the terminal and the railhead. Another 29% drive locally in the Seattle area. Forty percent of drivers drive to destinations outside the Seattle area in Washington. Seven percent of respondents drive long-haul; long-haul drivers were removed from the sample and their responses are not included in the analysis. See Table 4 for more information on the breakdown of employment and type of driving responses.

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Owner Operator</th>
<th>Drive for Owner-Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drayage</td>
<td>4%</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td>Seattle Area</td>
<td>11%</td>
<td>15%</td>
<td>3%</td>
</tr>
<tr>
<td>WA State</td>
<td>13%</td>
<td>24%</td>
<td>3%</td>
</tr>
<tr>
<td>Long Haul</td>
<td>1%</td>
<td>5%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>29%</strong></td>
<td><strong>61%</strong></td>
<td><strong>10%</strong></td>
</tr>
</tbody>
</table>

For the vast majority (88%), truck driving is a full-time, year-round job. Although the average driver has been doing this job for about eleven years, 45% have been driving a truck for five years or less.

\(^{25}\) Punjabi is spoken on the Indian subcontinent (primarily in India and Pakistan); Amharic is spoken in Ethiopia; Tigrinya is spoken in Eritrea as well as Ethiopia.
Earnings & Benefits

Average annual earnings were $31,341. Median annual earnings were $28,500. Sixty-four percent of short-haul drivers earned no more than $30,000 in 2005, and nearly a quarter earned less than $20,000. See Figure 2; more information on truck driver earnings can be found in the next section, Findings and Analysis.

Sixty-seven percent of drivers do not have health insurance, and 81% do not have retirement benefits. See Figure 3 for more detail.

Driver responses to other survey questions, as well as detailed methodology, can be found in Appendix 3, Survey Results.

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26 When reporting annual earnings, owner-operators were asked to subtract all truck-related expenses.

27 The median is the middle number in a list of numbers, arranged from lowest to highest. Half of the numbers are greater than the median, and half are smaller.
Figure 4. Diagram of Interrelated Trucking Issues
Our findings fit within into three interrelated areas:

- **Economic issues**, including low earnings for many short-haul drivers and systemic barriers to efficient freight mobility;
- **Environmental and safety issues**, including pollution from aging trucks, accidents caused by faulty equipment and under-trained drivers, and security concerns; and
- **Social issues**, including communication problems between truck drivers, many of whom are non-native English speakers, and longshore workers, who are predominately U.S. born.

### Economic issues

Five of the issues we identified are primarily economic in nature:

- Low earnings,
- Driver supply and demand,
- The unpredictable flow of cargo,
- Terminal slowdowns, and
- Barriers to freight mobility.

### Low earnings

“The truckers are not making enough money- they don’t make a living wage, they don’t get health care benefits, and they don’t make enough to reinvest in their trucks.”

-Labor representative

Truck driving once paid decent wages and benefits to workers with limited training and education. Today, many truck drivers in the Puget Sound region are just not able to make ends meet financially.

In our interviews, we heard that some short-haul truckers want to get out of the business. This was underscored by the survey, which found that 61% are thinking about getting into some other kind of work. More than one owner-operator reported that if he had understood the economics of the business, he would not have chosen truck driving as a profession.

“Some guys believe that if their wheels are turning they are making money, but their math is bad.”

-Terminal operator representative
We looked at truck driver earnings several different ways: annually, by last paycheck, and by the trip.

**Annual earnings**

Short-haul drivers reported average annual earnings of $31,341. Median annual earnings were $28,500. Sixty-four percent of short-haul drivers earned no more than $30,000 in 2005, and nearly a quarter earned less than $20,000. For those drivers who drive only in the Seattle area and to the railhead, average earnings were even lower, at $27,353. See Table 5 for a comparison of responses between owner-operators and employee drivers.²⁸

<table>
<thead>
<tr>
<th>Table 5. Annual Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Median</td>
</tr>
<tr>
<td>High</td>
</tr>
<tr>
<td>Low</td>
</tr>
</tbody>
</table>

Average truck driver earnings are less than the median wage of $36,977 for all King County workers.²⁹ However, they are slightly higher than the median earnings of $25,000 found among Port of Los Angeles/Long Beach drayage drivers.³⁰,³¹

By contrast, the Family Economic Self-Sufficiency Standard for King County calculates that in a two-parent household with two children in school, each parent must earn nearly $50,000 ($100,000 total) per year in order to meet the family’s basic needs.³²

We ran a regression analysis to determine which factors statistically correlate to increased or decreased annual earnings. Based on our initial data analysis, and other information gathered in our stakeholder interviews, we hypothesized that the following variables might significantly affect annual earnings:

- Years of experience as a truck driver,
- Number of turns per day,
- Whether the driver was born outside the U.S.,
- Race (White/Non-white), and/or
- Education.

Our initial regression analysis showed that none of these variables was statistically significant. However, the raw survey data showed several important patterns. Among owner-operators, annual earnings break down as follows³³:

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²⁸ When reporting annual earnings, owner-operators were asked to subtract all truck-related expenses.
³⁰ Monaco and Grobar, “A Study of Drayage at the Ports of Los Angeles and Long Beach”.
³¹ We tried to compare our local earnings findings to state and national data. However, labor market statistics on truck driver earnings in Washington and elsewhere around the country are generally incomplete. The Washington Employment Security Department captures data only on employee drivers for whom unemployment insurance is required and does not collect data on owner-operators who work on contracts.
³³ For the regression, we began analyzing the earnings data in more detail by removing part-time drivers from the
Table 6. Variations in Earnings Among Owner-Operators
Annual earnings reported by drivers surveyed

### Country of Birth

<table>
<thead>
<tr>
<th></th>
<th>American-born drivers (n=25)</th>
<th>Immigrant drivers (n=39)</th>
<th>Difference in average annual earnings= $12,648</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average earnings</td>
<td>$41,520</td>
<td>$28,872</td>
<td></td>
</tr>
<tr>
<td>Median earnings</td>
<td>$35,000</td>
<td>$27,000</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>91%</td>
<td>20%</td>
<td>Non-white</td>
</tr>
<tr>
<td>Non-white</td>
<td>9%</td>
<td>80%</td>
<td></td>
</tr>
</tbody>
</table>

### Type of Driving

<table>
<thead>
<tr>
<th></th>
<th>Statewide drivers (n=25)</th>
<th>Local (railhead and Seattle-area) drivers (n=39)</th>
<th>Difference in average annual earnings= $11,040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average earnings</td>
<td>$40,540</td>
<td>$29,500</td>
<td></td>
</tr>
<tr>
<td>Median earnings</td>
<td>$35,000</td>
<td>$27,000</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>65%</td>
<td>42%</td>
<td>Non-white</td>
</tr>
<tr>
<td>Non-white</td>
<td>35%</td>
<td>58%</td>
<td></td>
</tr>
</tbody>
</table>

### Industry Tenure

<table>
<thead>
<tr>
<th></th>
<th>Drivers with more than 10 years experience (n=27)</th>
<th>Drivers with 10 years experience or less (n=37)</th>
<th>Difference in annual earnings= $8,044</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average earnings</td>
<td>$38,463</td>
<td>$30,419</td>
<td></td>
</tr>
<tr>
<td>Median earnings</td>
<td>$30,000</td>
<td>$28,500</td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>82%</td>
<td>30%</td>
<td>Non-white</td>
</tr>
<tr>
<td>Non-white</td>
<td>18%</td>
<td>70%</td>
<td></td>
</tr>
</tbody>
</table>

### Race

<table>
<thead>
<tr>
<th></th>
<th>White drivers (n=31)</th>
<th>Non-white drivers (n=33)</th>
<th>Difference in annual earnings= $13,282</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average earnings</td>
<td>$40,661</td>
<td>$27,379</td>
<td></td>
</tr>
<tr>
<td>Median earnings</td>
<td>$35,000</td>
<td>$25,000</td>
<td></td>
</tr>
</tbody>
</table>

dataset. Due to the differences in how annual earnings are reported, we also removed the 6 employee drivers who reported annual earnings from the dataset.
On average, we found that white short-haul drivers earn $13,000 per year more than non-white drivers do, and American-born drivers earn an average of $12,600 more than immigrant drivers do. Statewide drivers earn $11,000 more than local drivers do and drivers with more than ten years of experience earn $8,000 more than drivers with ten years of experience or less. American-born drivers are 91% white, and drivers with more than ten years experience are 82% white.

Because the nature of the work between statewide drivers (who typically make one turn per day) and local Seattle-area and railhead drivers varies significantly, we separated out the statewide drivers and ran another regression analysis. Again, neither race, country of birth (U.S. versus foreign born), education, or industry tenure were correlated with an increase in annual earnings at a level of statistical significance. The only statistically significant factor in this group was turns per day; each additional turn per day for local drivers was associated with an increase in annual earnings of just over $2,900. See “Earnings per trip” below for further discussion of the implications of this finding.

**Table 7. Daily Pay Rate**
(from last paycheck or settlement check)

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Owner-Operator</th>
<th>Drive for Owner-Operator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>36</td>
<td>81</td>
<td>11</td>
</tr>
<tr>
<td><strong>Mean</strong></td>
<td>$139</td>
<td>$286</td>
<td>$104</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>$138</td>
<td>$210</td>
<td>$100</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>$320</td>
<td>$750</td>
<td>$156</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>$33</td>
<td>$31</td>
<td>$75</td>
</tr>
</tbody>
</table>

We also ran a regression analysis on the last paycheck or settlement check data for owner-operators. The only factor that was statistically significant was the number of hours worked per day. Each additional hour worked was

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**Earnings from last paycheck or settlement check**

We asked drivers to report both their most recent paycheck or settlement check and the number of days it covered. Respondents reported earning periods ranging from three to 29 days. Therefore, we averaged their most recent check over the number of days they had worked to get a daily pay rate. As shown in Table 7, for employee drivers, this average was $139. For owner-operators it was $286, while for drivers working for other owner-operators, it was $104. Note that for owner-operators and those who work for them, this is gross pay, while it is net pay for employee drivers.

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34 \( t = 2.970 \)

35 Owner-operators are generally paid in biweekly "settlement checks", from which no expenses, such as fuel and truck maintenance costs, have been deducted.
associated with $38.39 more in daily pay. For those owner-operators working only in
the local area, each additional hour of work was associated with $26.60 more in daily pay.

However, drivers cannot necessarily work more hours than they currently do in order to
increase earnings, because our average short-haul driver already works 11 hours per day.

Earnings per trip
Most short-haul drivers, including 81% of the
drivers surveyed here, are paid by the trip. Table 8 gives some sample rates that are paid
by trucking companies.

Table 8. Sample Pay Rates to Drivers

<table>
<thead>
<tr>
<th>Port of Seattle to</th>
<th>Miles</th>
<th>Base rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spokane</td>
<td>280</td>
<td>$600</td>
</tr>
<tr>
<td>Sumner</td>
<td>35</td>
<td>$110</td>
</tr>
<tr>
<td>Auburn</td>
<td>28</td>
<td>$100</td>
</tr>
<tr>
<td>Kent</td>
<td>29</td>
<td>$80</td>
</tr>
</tbody>
</table>

The rates shown are for return trips, and assume that a driver will return with another
container. The driver may pick up the container at the place where he makes the
delivery, or he may be sent to another location nearby. In the case of runs outside of the area
between Tacoma and Everett, drivers generally deliver a full container from Seattle, wait for it to be unloaded, and then drive back
to Seattle with the same container, now empty.

For a one-way drayage trip delivering a container and/or chassis from a port terminal
to the railhead (or the reverse) drivers are generally paid between $35 and $50.

In addition, one trucking company
representative we interviewed reported that they pay a “premium” of $15 to drivers
whenever they must make a pickup or delivery at Terminals 5, 18, 46, or 115. This is intended
to account for backups, delays, and the limited
8 a.m. to 5 p.m. hours at the terminals.

The number of trips a driver makes per day
depends on how much work the trucking company has, freeway and street traffic, and
tie-ups at port terminals or the railhead. Local
drivers (railhead and Seattle-area) average 4.6
turns per day.

Owner-operators driving locally who are
being paid by the trip reported average pay of
$62 for their current trip, with a median of
$44. By contrast, owner-operators who drove
outside the local area in Washington reported
average earnings per trip of $270.

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36  t = 3.068
37  t = 2.311
38  The table in this data was compiled from interviews with
    motor carrier company representatives. These rates are
    only generalized examples, and may not include “add-ons”
    such as wait time when drivers are detained for paperwork
    or to help loading/unloading containers.
Many stakeholders told us that adding more turns per day would be the best way to increase driver earnings. As discussed above, our regression analysis found that for owner-operators who drive locally, an increase in turns per day is statistically significant, associated with an increase in annual earnings of just over $2,900 for each additional turn per day.

However, owner-operators cannot increase the number of turns per day through their own actions. The average short-haul driver already works 11 hours per day, and 9% of all short-haul drivers reported working as much or more than the legal maximum of 14 hours per day. Adding one turn per day to increase driver earnings could happen only through improved efficiencies in the port trucking system and on local roads, which are outside the control of truck drivers. Moreover, that increase is unlikely to raise the earnings of many drivers to an adequate living wage.

**Fuel Surcharge**

As part of compensation, some truck drivers receive a fuel surcharge, which covers a small part of the cost of fuel. Whether a truck driver receives a fuel surcharge is dependent upon the trucking company. Shippers are not required by law to pay a fuel surcharge; some do, and some do not. Furthermore, trucking companies that receive fuel surcharges from shippers are not obligated to pass them on to the truck driver. Of the drivers surveyed, slightly more than half (56%) received a fuel surcharge.

**Benefits**

Both our interviews and the survey found that few short-haul drivers are covered by health insurance. Sixty-seven percent of the drivers surveyed do not have health insurance. As one driver wrote on his survey, “I don’t have any benefits and I can’t pay health insurance because I can’t afford it.”

**Conclusion**

Annual earnings for port truckers in Seattle vary greatly, and the relevant factors appear to include both things that are within the control of drivers (years of experience and type of driving) and things that are not (race, country of birth, and turns/hours per day).

The majority of port truckers in Seattle do not make enough to meet the basic needs of their families. Low wages also hinder drivers’ abilities to be able to purchase and maintain vehicles that pollute less, which will be discussed in depth in the *Environmental/Safety Issues* section.

> “Everyone in the industry seems to be making money except for the truckers. It’s un-American.”

- Terminal operator representative
**Driver Supply and Demand**

Whether or not there is a shortage of drivers is a point of debate among stakeholders in the freight-moving industry. Perception of the magnitude of the problem depends upon where one is situated in the system.

Terminal operators, steamship lines, and railroad companies reported that driver shortages do not affect them directly. Some stakeholders said there actually are too many drivers in the system, resulting in inefficiency at the terminals. As one of them put it, “There are plenty of trucks, but not enough hours of operation.” They further claimed that competition between these drivers is pushing rates down.

“They are five drivers in line to replace you.”

- Truck driver

On the other hand, trucking companies and freight brokers said that during the high labor demand season, from July through October, there are not enough drivers to move all the goods being shipped. Trucking companies do everything they can to identify and contract with new owner-operators, even poaching from each other when needed. Drivers reported that they can earn upwards of $1,000 per day when there are more containers to be moved than drivers to move them. Some steamship lines have responded to seasonal shortages with increases in local delivery rates.³⁹

“During the off season we have enough drivers, but during the busy high season no one in the Northwest has enough drivers.”

- Trucking company representative

During the low demand season, however, many drivers face underemployment. As one trucking company representative explained, “during slow periods we might not even have enough work for all of our drivers. At those times we have them work four days a week.” Unlike other seasonal workers such as construction workers, owner-operators are not eligible for unemployment benefits, since they are self-employed.

Although the hard data is somewhat inconclusive, the consensus in the cargo-moving and trucking fields is that more truckers, both long and short-haul, will be needed to meet growing demand. Washington Trucking Associations, which represents 950 trucking companies, expects the entire state will need 10,000 to 15,000 new truckers over the next five years.

Many stakeholders in the freight system are concerned that there will not be enough truck drivers to meet this growing demand. Our finding that 61% those surveyed are thinking about leaving truck driving for some other kind of work underscores that concern.

**Unpredictable flow of cargo**

The “just-in-time” nature of the intermodal shipping system adds to the challenge of moving cargo efficiently. Shippers and retailers want to receive the most up-to-date goods at the last possible minute in order to avoid storage and inventory management costs. As a result, terminal operators and railroad companies often do not know more than a day or two in advance of major activity in their yards.

Drivers cannot predict when they will have work, because steamship companies and terminal operators cannot predict when ships will arrive. The system relies on short-haul drivers calling dispatchers each morning, to find out whether there is any work that day.

Longshore contracts build in compensation for this unpredictability, and terminal operators pay a premium for the last-minute availability of longshore labor. This is another area where, as independent contractors, owner-operators lack a mechanism to effect rate changes in response to changing labor demands.

**Terminal slowdowns**

Slowdowns at the port terminals cluster around opening times, generally at the beginning of the day, and immediately after longshore worker breaks. Slowdowns also are driven by the unpredictable flow of freight traffic. Sudden rushes of trucks into the terminal create backups, which translates into longer turnaround times.

The effort to move containers quickly with little advance warning creates a stressful working environment. Errors are inevitable, and with a pricing system that pays truck drivers by the move rather than by the hour, truckers and trucking companies often bear the financial brunt of others’ mistakes.

Every moment that truck drivers wait for paperwork, for an inspection, or for a longshore worker to hitch or unhitch a load is lost revenue. With some 30% of all port cargo hauled directly to rail yards, slowdowns have significant ramifications for local drivers.

On average, short-haul drivers (including those who drive outside the Seattle area) make 3.8 turns (return trips) per day. Sixty-four percent of the drivers reported that they waited more than an hour on their last trip to the terminal to get their I.D. verified and to

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Terminal operators and the Port of Seattle are already engaged in efforts to improve the pace of freight turnaround, including the following:

- **Optical character recognition (OCR)** technology is being introduced at the international terminals and one domestic terminal. Each power unit, chassis, license plate, and container has its own unique bar code. As the trucks move through the terminal, cameras read these codes and a computer system translates the photos into data that is entered into the system.

- **Rubber tire gantry cranes (RTGs)**, which are currently located at terminals 18 and 46, can sort through stacked containers at the terminals quickly.

- **Global positioning software (GPS)** allows the terminal operator to keep track of exactly where each container is located.

- **Radio frequency identification (RFID)** involves a tag placed on the container. When the container passes a certain checkpoint in the process, information is sent to the appropriate party. The Port of Seattle recently began a pilot RFID system with 750 truckers.

Complicating matters is the fact that different players in the system have different capacity levels. While a marine terminal may have introduced one or more of these technologies to speed traffic to the out-gate, the railroad yard that is receiving these trucks may not have the ability to handle the increased number of containers. Short-haul drivers may move quickly off the terminal, only to find themselves sitting in line at the in-gate of the railyard. Therefore, an improvement at any one point in the system may not speed up the movement of freight in the system overall.

**Barriers to freight mobility**

“It’s much easier to get goods to Seattle from Qingdao than it is to get them from Seattle to Woodinville.”

-Freight company representative

Road congestion in the Puget Sound region is a major issue. Seattle may be the 23rd largest city in the country by population, but it has the 12th worst travel time index for peak travel (worse than Boston or Dallas-Fort Worth), according to the Texas Transportation Institute’s annual urban mobility study. In addition to automobile congestion, truck drivers also face delays caused by freight trains. The Washington State Supreme Court has ruled that the railroads have the right to

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Port Jobs did not set out to study freight mobility, an issue that has been examined in far greater detail elsewhere. However, freight mobility is extremely important to short-haul truckers, as it affects their earnings and working conditions. When trucks are stuck in traffic, earnings drop for both owner-operators and for the businesses that rely on the goods in the trucks.

Efforts to improve freight mobility through the Puget Sound region include the FAST Corridor, the Regional Freight Mobility Roundtable, the City of Seattle’s Freight Mobility Program, the Freight Mobility Strategic Investment Board, and the Washington State Department of Transportation’s Freight Office. City, county, and state governments have been engaged, along with port authorities and private businesses. Seven of FAST’s original fifteen railroad grade separations and port access projects to improve freight movement along the I-5 corridor have been completed, and maps have been developed showing the “best” truck routes through Seattle and Tacoma.

An example of an effort to reduce truck congestion is the OffPeak Program, implemented in 2005 at the Ports of Los Angeles/Long Beach. This program, which allows ports to stay open later hours, is administered by, and often referred to as, PierPass. Terminal operators continue to operate gates late into the night, when traffic on local highways is clearer. It was predicted that less congestion would lead to more turns over the course of the night, which would increase overall earnings. In addition, an environmental benefit was predicted, since cloud cover is less at night, which may reduce pollution problems.

At first, terminal operators refused to stay open later hours. The state legislature stepped in and imposed a per-container fee that shippers must pay for every container moved by day. No fee would be paid for moving containers by night. In the first year of PierPass, between 30% and 35% of container traffic was moving during off-peak hours.42

There are conflicting opinions about whether PierPass has contributed to greater earnings and productivity. A 2006 PierPass study found that “more than four in ten truckers continue to say they are able to make more trips per shift because of the OffPeak Program, and about 60 percent of those with greater productivity also report higher earnings.”43 Conversely, a study

42 http://www.pierpass.org/press_room/releases/?id=38
Stakeholders in the Puget Sound region have varying views on whether regular nighttime hours would be beneficial. Some see a 24/7 port operation as inevitable; others argue that it would be impossible because the capacity of the rest of the system is inadequate, from local roadways to railyards to the supply of truck drivers.

Solutions to traffic congestion and freight mobility barriers require multiple players. The Ports of Seattle and Tacoma have benefited from major road and rail congestion in Southern California, as some shippers have chosen to move their freight through the Puget Sound instead. If ports, highways, and railroads here become overloaded, shippers could just as easily move on to other ports.

**Environmental & safety issues**

Six of the issues we identified are fundamentally related to the environmental and safety impact of the port-related trucking industry:

- Truck-related pollution,
- Equipment maintenance,
- Driving skills,
- ‘Hours of service’,
- Terminal rules and regulations, and
- Homeland security.

While we did not set out to study port-related pollution, environmental concerns are incontrovertibly linked to workforce social issues and freight mobility.

**Truck-related pollution**

As the number of container ships and trucks grow with the movement of freight, ports across the country are increasingly seen as major sources of pollution. A single container ship can emit as much exhaust per day as 12,000 cars. Environmental justice advocates and air quality experts are pressuring ports and terminal operators to alter their

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operations to cause less environmental damage.\textsuperscript{45}

The Port of Seattle has implemented a variety of projects and programs, and is participating in several collaborative projects, to reduce emissions from maritime sources.\textsuperscript{46} For more information on these projects, see Appendix 8, \textit{Pollution Reduction Programs at the Port of Seattle}.

In addition to these activities, the Port of Seattle Commission recently requested that an action plan be submitted and approved in 2007 to “significantly reduce air emissions across transportation modes (including but not limited to emissions from ships, on-dock equipment and drayage trucks)”.\textsuperscript{47} The Commission also passed a resolution in 2005 expressing commitment to maritime air quality.\textsuperscript{48}

In 2005, in an effort to reduce pollution, the Port of Tacoma Commission directed that all diesel equipment at Port-operated facilities use ultra-low sulfur diesel fuel (ULSD). In 2006, the Ports of Los Angeles/Long Beach made headlines when they announced a five-year initiative to reduce diesel emissions from ships, trains, and trucks by 50%.

For truckers, one emerging issue is the impact of engine idling in and around port facilities. Long wait times increase the volume of diesel tailpipe emissions (as well as noise pollution from truck engines). Efforts such as RFID that reduce terminal wait times, mentioned in the earlier section on \textit{Terminal Slowdowns}, have a positive effect on truck-related pollution reduction.

Engine idling impacts are exacerbated by drivers who save money by cutting corners on maintenance and lodging costs. Nearly 40% of the drivers we surveyed reported sleeping in their trucks at least once during the past year, which sometimes means keeping engines running to air-condition or heat their cabs while they wait or sleep.\textsuperscript{49}

Some municipalities have dealt with these problems by passing anti-idling ordinances, which are opposed by many owner-operators. Another solution to this problem is to install electrical outlets at truck stops for truckers to plug their cabs into. However, as one former long-haul driver reported, Seattle is one of the only cities in the U.S. that does not have truck

\textsuperscript{45} Many studies have looked at the environmental impact of port-related activities. For example, the Puget Sound Maritime Air Forum, led by the Port of Seattle, published an inventory of maritime-related emissions in the Puget Sound airshed in April, 2007.

\textsuperscript{46} Port of Seattle. See: http://www.portseattle.org/community/environment/airsea.

\textsuperscript{47} Port of Seattle Commission Motions, February 16, 2007.

\textsuperscript{48} Port of Commission http://www.portseattle.org/community/environment/airsea.shtml

\textsuperscript{49} For more detailed information, please see Appendix 3, \textit{Survey Results}.
stops. The Puget Sound Clean Cities Coalition is working to educate truckers about alternatives to idling and to coordinate with state and federal agencies on idling-reduction legislation and/or the creation of an electrified truck stop system along the I-5 corridor.

"Seattle doesn't have ANY truck stops, and there's no place to park our trucks."

- Truck driver

**Equipment maintenance**

Trucks are an expensive fixed cost. With used bobtails running from $6,000-$80,000, and new cabs starting at more than $100,000, many owner-operators purchase cheaper, older trucks.

The short-haul owner-operators surveyed, on average, own vehicles that are eleven years old, and range from two to 20 years old. Our survey also found that the average short-haul driver drives 58,000 miles per year, and is thus using a vehicle with 638,000 miles on it.

Older trucks are more prone to breakdowns, and they pollute more than newer ones. Pollution and unsafe vehicles are a problem for everyone at the terminal. Although new technologies that reduce emissions have been developed, many short-haul owner-operators cannot afford to buy and install them. An owner-operator might wait to replace worn tires or have brake work done on his own bobtail, or hold off on taking the truck in for service until it has broken down.

Multiplied by the more than 2,200 port-related truck trips each day in the Puget Sound region, these maintenance issues can have a major impact on health and safety. Do all owner-operators cut costs in unsafe ways?

No, but discussions with local drivers suggest that some do.

**Other equipment**

Owner-operators report that sometimes the chasses and containers provided by the terminal operators and railroad lines are unsafe for transport. Drivers do not own this equipment and have no control over its maintenance and condition. Some of the most commonly cited problems were damaged chasses, illegally overweight containers, broken headlights or taillights, and brake or tire problems. Even drivers who keep their own bobtails in good working order may pick up damaged equipment or overweight loads. Some terminals have what is referred to as a “roadability check”; others leave it to drivers to make sure that the equipment they are using and the loads they are moving are safe and legal. At a minimum, most drivers check out the brakes, tires, and lights prior to leaving the terminal.
When a driver discovers he has been given a container or chassis with a problem, he has two choices: 1) to report the damage at the “trouble window”; or 2) to take his chances on the road. The containers (and sometimes chasses as well) are owned by the steamship line or the terminal operator. Each terminal has a repair shop and basic problems can be repaired on the spot. However, every minute a driver spends in line at the trouble window, or waiting for a repair, is lost income. Sometimes drivers choose to leave the terminal with a damaged chassis or an overweight load.

**Driving skills**

Trucking companies’ insurance companies do not allow them to contract with owner-operators who have fewer than two years of experience driving big rigs.

“The worst thing about being a truck driver is that other drivers don’t realize this is a BIG rig.”

- Truck Driver

Most new drivers work as employee long-haul drivers for their first few years in the industry. Long-distance driving on the open road is less dangerous than maneuvering in congested city streets, and gives newer drivers a chance to hone some driving skills. Driving in reverse and parking are two of the most difficult skills for a big rig driver to master. Several stakeholders said these complicated maneuvers are the areas where they see the most problems. These skills are less likely to be needed in long-haul work, so opportunities to practice them are limited.

Trucking companies cannot contract with drivers straight out of CDL training. “The truck driving schools are not a good breeding ground for new drivers. Our insurance company requires a minimum of 25 years old plus two years experience,” one trucking company representative said. Another trucking company is negotiating with its insurance company to develop an in-house training program that would allow them to hire newer drivers.

CDL schools range widely in the quality of training they offer. As discussed in the earlier section, “Trucking: An Overview,” recent rule changes at the federal level mean that a driver could pass the written and driving test for a CDL after having only ten hours of training. Not one of these hours is required to be on the road behind the wheel of a big rig. As a result, some new drivers coming out of CDL programs may have only the most basic driving skills. This is a major safety concern for trucking companies, their insurance companies, fellow drivers, and the public.

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50 See Glossary.
Several stakeholders related stories about problems caused by drivers with limited skills. One short-haul driver we interviewed complained about new drivers who completed short four-week training courses and became truckers without learning how to read a map. Another driver reported that he has helped to train fellow drivers on how to reverse and park in tight spaces.

‘Hours of service’

In 2005, the Federal Motor Carrier Safety Administration (FMCSA) revised its ‘hours of service’ rules for truck drivers. These rules apply equally to all big rig drivers in the U.S., whether they drive cross-country, or short in-city drayage runs. In summary, truckers may drive no more than eleven hours after ten hours off duty, and they may work no more than 14 hours per day. Once the clock has started on work time, it cannot be stopped and restarted for breaks or loading and unloading time. Drivers are required to keep logs of their work and driving hours. Employers are responsible for enforcing and keeping those logs for their employees.

These rules are highly controversial. Truckers contend that hours spent waiting in line should not count against their 14-hour maximum. OOIDA argues that these rules encourage drivers not to take short breaks for naps when they need them. Public safety groups also argue that the ‘hours of service’ rules allow drivers to drive for too long without adequate rest. However, their 2005 petition for a rule change was denied by the FMCSA.

A recent New York Times article reported that truckers regularly falsify their logs in order to hide the number of hours they actually drive. Several of our interviewees confirmed this practice.

The ‘hours of service’ rules are relevant to our finding that work hours had a statistically significant impact on the daily earnings of owner-operators. In fact, this was the only statistically significant factor affecting daily earnings; more hours translated into greater daily earnings. On average, these drivers report that they already work eleven hours per day; nine percent of them reported that they work 14 or more hours daily.

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Terminal rules and regulations

“Every terminal needs its own playbook. It would be great to even get a map of each terminal.”

-Truck Driver

Rules and regulations are different at each terminal, requiring drivers to know a variety of routes, numbering systems and speed limits. This creates confusion for both new drivers and old-timers. Drivers report that some terminals are not well marked with directions.

At the same time, terminal operators report that they make tremendous efforts to share information with trucking companies and drivers. These efforts range from handing out maps at the in-gate, to posting information on their websites, and hosting meetings for trucking company managers.

“I want to understand what truckers experience at the terminal. I use the toilets the truckers use and I go to the gut wagon they go to.”

- Terminal operator representative

Still, both drivers and terminal operators acknowledge that many drivers do not have the information they need to navigate the terminals efficiently. When changes are made to the terminal layout or systems, information about these changes often does not filter down to the drivers in a timely fashion. This results in truckers losing time as they drive through the terminal looking for the right container or line, and frustrated longshore workers confronting drivers who are in the wrong place or making wrong turns.

“Once someone understands the system, I'll never see him in trouble again.”

-Terminal operator representative

Homeland security

Cargo safety has become an increasing concern to the federal Transportation Security Administration (TSA). However, shippers, trucking companies, and drivers worry that evolving security requirements could further slow the flow of cargo or become a barrier to bringing more drivers into the field. Since 2001, scrutiny of cargo and those who transport it has increased.

Customs and Border Protection officials can x-ray containers, and/or have them unloaded and physically inspected. In addition, the Department of Homeland Security plans to install radiation detectors at ports throughout the country, including Seattle and Tacoma.
An estimated 40,000 truck drivers in Washington state are licensed to transport explosives, gasoline, and poisonous chemicals. In 2005, Washington State implemented a federal regulation requiring that all drivers licensed to transport hazardous materials be fingerprinted, and their information checked against various FBI, CIA, and Interpol databases.

Owner-operators with multiple endorsements and security clearances have complained that these new TSA hazmat requirements are duplicative and a waste of time. In addition, increasing security clearances could become a barrier for foreign-born drivers, who may not be able to provide all of the documentation required, despite having the legal right to work in the U.S.

Early in 2007, the Department of Homeland Security began introducing its Transportation Worker Identification Credential (TWIC). Once the system is fully implemented, all workers requiring unescorted access to secure areas of any U.S. marine ports, including port truckers, will be required to obtain a TWIC card. This will require fingerprinting and an FBI background check. Recent media reports have included concerns from some freight system stakeholders that TWIC might result in a decrease in the pool of available drivers. Some also expressed concern that physical review of the each driver's TWIC could further slow traffic at port terminals.

### Social issues

We discovered conflicting attitudes among truck drivers about their jobs. These drivers generally enjoyed the freedom that their jobs gave them, and the camaraderie that they share with fellow drivers.

Some drivers also reported frustration with their inability to make a decent living, their long work hours, unpredictable schedules, and the way they were treated by longshore workers. A few drivers at one trucking company also reported giving gifts to a company dispatcher in order to be assigned better routes. Even drivers who otherwise loved their jobs voiced some of these complaints.

> “I love my job. The thing I like best about it is the people I work with.”
> -Truck driver

In spite of all the difficulties of being a truck driver, a spirit of mutual aid exists among drivers. Some interviewees held fund-raisers to help pay for medical bills or housing for fellow drivers who had fallen on hard times.

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At some companies, drivers look out for each other on the road by, for example, calling in highway traffic problems. More experienced drivers act as mentors for newer drivers, sharing advice about financing equipment and finding affordable repairs.

“I never pay for my own dinner.”
-A truck driver, talking about how his colleagues repay his assistance with truck repairs

Three social issues arose which appear to have a significant impact on working conditions for short-haul drivers:

- Truckers relationships with longshore workers,
- English as a second language, and
- Lack of a centralized organization among owner-operators.

**Trucker relationships with longshore workers**

“*The type of communication can set the tone. Sometimes you can see the red start in the face. Some of the ILWU people we get from the hall are not good at communicating with the drivers.*”

-Terminal operator representative

Conflict between longshore workers and truck drivers at the marine terminals is a problem that is acknowledged by all stakeholders in the system. Miscommunication and disagreements in this high-stress environment can lead to physical altercations. This affects working conditions for everyone at the terminals, and can reduce the efficiency of terminal operations. Drivers report that they are often treated disrespectfully; while longshore workers report that they are often frustrated by inexperienced drivers.

The causes are rooted in part in the complex differences between these two workforces. Comparatively, longshore workers are more likely to be American-born and white, and they are all union members. Truck drivers, by contrast, are largely foreign-born, almost half are people of color, and few are covered by union contracts.

But nothing is more basic to the conflict than the fact that truckers are largely paid by the move, while longshore workers are paid by the hour. The more turns a truck driver makes (the more containers he delivers), the more he is paid, so drivers have an incentive to move faster. Longshore workers, on the other hand, are paid by the hour and will make the same amount of money no matter how many containers are moved. The International Longshore and Warehouse Union (ILWU) contract stipulates a lunch hour and other
breaks during the day. Operations at some terminals come to a complete stop at those times.

“Longshore sits on top of the financial food chain and the truckers sit at the bottom.”

-Terminal operator representative

Complicating matters is the way that longshore workers get their work assignments. At some terminals, new clerks arrive every day and must be trained. A new clerk may not be familiar with the specifics of his job, or with the routines at that particular terminal. In some cases, clerks may not have strong typing skills and therefore may work slowly. As terminal operations have become increasingly computerized, clerks without the necessary technology skills have become a greater challenge for both truck drivers and for terminal operators.

Every container coming through the Port has its own container number, seal number, and booking number. Every trucking company has its own identification number. Every company that does business at the Port has its own unique system for numbering its shipments. Often, these numbering systems are a mix of letters and numbers that are easily confused. Because there is no centralized numbering system, confusion often arises between drivers and longshore clerks as they move containers. Many of the technologies being introduced to the terminals are intended to reduce opportunities for errors, as well as the need for interaction between drivers and longshore workers.

Both drivers and company stakeholders reported that the trucking companies cannot always be relied upon to support their drivers when problems arise. One terminal operator representative said that he prefers not to call a trucking company when he has a problem with a driver because, “If I call a dispatcher at a trucking company and tell him a guy is driving badly or having a beef with a longshoreman, the trucker would get fired.”

The incentives for truckers to move quickly can cause a number of problems, including speeding or turning the wrong way. Sometimes, drivers report a load that looks problematic as “lost,” in order to avoid having to deliver it. Drivers who get confused at the terminals may find themselves driving where they should not. When these events occur, longshore workers may confront the driver or use more indirect tactics, such as moving slowly or sending the driver to the back of the line. All of this results in increased tension between the two groups at the terminals.
English as a second language

“If you have an accent, you are treated with discrimination. We are all Americans, no matter where one is born.”

-Truck driver

Some stakeholders raised concerns about foreign-born drivers and their command of written and verbal English. Fifty-four percent of the drivers surveyed reported having been born outside the U.S. Among those drivers, at least 19 different languages are spoken. This makes the port truckers in Seattle more diverse in some ways than truckers at the Ports of Los Angeles/Long Beach, where Spanish and English predominate.53

Several stakeholders – both drivers and company officials – suggested that in many cases the issue might be one of accents rather than language comprehension. Problems caused by language difficulties often come to the surface in interactions between truck drivers and the mostly American-born longshore workers.

The introduction of new technologies in terminal operations means that communication between drivers and longshore clerks takes place over radios, speaker boxes and headsets, all which can distort voices. During high stress periods when trucks and containers are moving quickly in and out of the terminal gates, speakers’ accents may become magnified, and listeners’ capacity to understand may decrease.

Lack of centralized organization among owner-operators

Right now, short-haul drivers function as independent workers or businesses in a system that is dominated by very large interests. Each of the larger interests has established some kind of advocacy association: Washington Trucking Associations represents trucking companies; the Pacific Maritime Association represents steamship lines, terminal operators and others; and the International Longshore Workers Union represents longshore workers. In fact, truck drivers may be the only interest at the ports not actively represented by some kind of umbrella organization in the Puget Sound region.54

A number of organizing models have been tried around North America, with varying levels of success. Short-haul drivers at the Port of Vancouver, B.C., formed an association that later became a local of the Canadian Auto Workers union, something

53 Ninety-three percent of short-haul in the Los Angeles/Long beach survey identified themselves as Hispanic. Monaco & Grobar.

54 While OOIDA exists (see Glossary), it is not active in the Puget Sound area.
that is not possible under U.S. law. At the Port of Miami, Teamsters organized a hiring hall for owner-operators. It failed after companies refused to hire drivers from the hall, but the experiment offers lessons that might evolve into something that can work. Some kind of hiring hall may be a middle ground between the free agent system currently in place, and the once highly regulated freight system. For more information, see Appendix 6, Organizing.

The same diversity of ethnicities and languages that creates a barrier to communication presents a challenge to establishing a truck driver association for owner-operators. However, the benefits could be worthwhile. We will discuss this further in our Recommendations.
**OWNER-OPERATOR PROFILE: Bob***

Bob is an owner-operator who has driven for a living for ten years. He owns his own bobtail (the cab of the truck, excluding the trailer), and drives for a small company with four other drivers. Before becoming a truck driver he worked in manufacturing. Although he has driven longer hauls through the Pacific Northwest in the past, today he does a dedicated short-haul run between central Washington and Seattle.

Bob’s work week starts on Sunday night when he drives from his home near Mount St. Helens to central Washington. After sleeping overnight in his truck he picks up his container Monday morning and drives it to the Port of Seattle, where he picks up another container and drives it to central Washington. He sleeps in his cab again that night and does the same thing every day for the rest of the week. On Friday nights, after dropping his container in central Washington, he drives home.

Work days start at 7 a.m. and can run from nine to thirteen hours, depending on conditions at the terminals, on the roads, and whether or not he helps out a fellow driver. In 2005, Bob grossed nearly $90,000; after taxes, fees and business expenses his net income was half that: $45,000.

Bob drives a 1996 bobtail that he bought four years ago from a dealer for $20,000, financed through a bank loan. Doing his own mechanic work on his bobtail, he says, is the only way he can make ends meet. He spent $16,000 in 2005 on truck maintenance and estimates it would have been twice that if he’d had to pay a mechanic for all his work. In fact, his goal is to continue driving a truck for about ten or fifteen more years, and then open his own big rig repair shop.

The best thing about being a truck driver is the people he meets. The worst things are breaking down on the road, and bad drivers. City drivers on their cell phones, he says, are the worst.

Bob likes to help out other truck drivers, working on their engines, recommending shops with better rates and service, and advising newer drivers on how to buy their own rigs. Sometimes drivers will get together to raise money to help a fellow driver with high medical bills or other financial problems. Bob never charges his fellow drivers for repair work, but he says that his grateful colleagues make sure "I never pay for my own dinner."

*Not his real name.
Below, Port Jobs offers a series of recommendations to help address the issues raised in this study. Training, education, and related services can be first steps to help drivers make the best of the system as it is. Broader systemic changes will take more investment, and will require cooperation and coordination among the varied stakeholders within this system.

Economic issues are closely intertwined with environmental/safety issues, and social issues must be addressed as part of making the system work better for all stakeholders. If the supply of truck drivers is to keep up with demand, a mix of programs and concerted actions will be required to ensure that driving a truck remains a viable career option.

Priority Recommendations

1. Develop the following training programs for owner-operators:
   - Small business management to help drivers manage their revenues and expenses while staying in compliance with federal, state, and local laws. This could include training in record-keeping and billing as well as personal financial management. Community colleges, which already have CDL training programs, could consider including curricula for small business management.
   - Language training specifically designed for non-native English speaking drivers, so that they can communicate more effectively on the job. This training might include any of the following, depending on driver needs: Vocational English as a Second Language (with vehicle-, port- and freight-related vocabulary), accent reduction, and communicating over radios and loudspeakers.
   - Terminal operations, including maps of the waterfront, how each terminal operates, and different types of technologies used at the terminals. All materials should be developed with non-native English speakers in mind.\(^{55}\)
   - Vehicle maintenance including minor repairs and maintenance, which can save drivers money, and keep them in compliance with state and federal laws.
   - Advanced driving skills, with an emphasis on reversing and parking, targeted at newer CDL licensees who received their initial driver training from short-term CDL schools.

2. Explore incentive programs, including financing mechanisms to help drivers buy new trucks or retrofit old trucks, in order to lower emissions and increase fuel efficiency and roadability, thus investing in both environmental and safety improvements, while reducing operating costs.

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\(^{55}\) For example, at Port Jobs’ Airport Jobs office all materials are screened by certified ESL instructors.
Since the top expense for owner-operators is the purchase of a truck, innovative financing mechanisms would allow more owner-operators to purchase newer vehicles or retrofit older ones.

Limited funding has been available from the U.S. Environmental Protection Agency (EPA) in recent years to help states and local governments mitigate or reduce diesel emissions. The EPA’s SmartWay Transport Partnership has partnered with the Small Business Administration to offer loans to small trucking businesses to upgrade equipment. At this point, it is unclear whether these loans, in their current structure, will work for short-haul owner-operators, both in terms of eligibility and cost savings.

Incentives could be developed for both lenders and truckers. For lenders, leveraging federal grants could make lower loan costs possible and provide a loan loss reserve. For truckers, the small business management training proposed in our first recommendation could be one component of a tiered program, which, if completed, would make drivers eligible for lower-cost loans.

Biodiesel and ULSD are two more potential lower-cost options for reducing emissions at the port. Terminal operators could create incentives for drivers making improvements to vehicles or using lower-emission fuels, by, for example, creating an express line for these drivers.

3. Begin to address working relationships between truck drivers and longshore workers.

Improving relationships at the marine terminals will be difficult, but not impossible. One approach would be to create advisory workgroups made up of frontline workers at the marine terminals, including truck drivers, longshore workers, terminal operator employees, and other relevant groups. These could be convened by the terminal operators or the Port of Seattle, and could develop recommendations on how to improve operations at the terminals. Some innovative ideas might emerge from this process, with the goal of building better relationships and more of a culture of cooperation between these disparate groups of workers.

4. Encourage truckers to explore the creation of a drivers’ association, which could, for example, lead to improved healthcare coverage and better communications.

There are many reasons why short-haul truckers should consider establishing some kind of driver association. Such an association could be the basis for establishing pools for health care coverage, truck insurance, or retirement benefits. It could seek out resources to support drivers with educational,
financial, and other needs. Representatives of this association could meet with longshore leaders to resolve problems between these two groups of workers. This association could be the point of contact for terminal operators and port officials, in order to communicate changes at the terminals. The association could advocate for better pay and working conditions. Again, such an association would not be a labor union, since under federal law independent contractors can neither join nor start a labor union.

5. **Address seasonal fluctuations in driver labor demand**

Demand for truckers is highest from July to October as shippers and retailers gear up for the holiday shopping season. Demand falls after that, and some drivers find themselves out of work.

The problem of seasonality needs to be explored from two angles. First, how can drivers find other sources of income during the off-season? This is an area for workforce development and job training organizations to explore. Are there counter-cyclical jobs in the freight movement industry? What jobs could drivers take that would keep them in practice for driving their big rigs? Since unemployment benefits are unavailable to owner-operators, are there any economic supports that drivers could access when they cannot find work? Second, how can the demand for drivers be met during the high season? Does Seattle need more trained drivers in the system? If more drivers are trained, what will they do in the off-season? These questions should be explored, with an eye to creating programs and allocating resources to help both truck drivers and trucking companies thrive.

6. **Reassess rates paid to trucking companies and to drivers for container deliveries within the Seattle area, in light of the earnings findings in this study.**

Most stakeholders in the system would prefer to increase driver earnings by making improvements that would allow drivers to make more turns per day. As discussed in the **Findings and Analysis** section, adding more turns per day is outside of the driver’s control, would require significant improvements in terminal efficiency and freight mobility, and would take years to achieve.

Some stakeholders privately acknowledged that rates have been flat and have even dropped over the past few years. One stakeholder explained that it has been relatively easy to convince customers to pay a fuel surcharge because they are paying more for gas in their cars. However, customers are less likely to consider increasing rates for local delivery because these truck drivers are virtually invisible in the system.
If stakeholders want to increase earnings for short-haul truck drivers, and make this a career that people will choose over construction or other opportunities, then the rates paid to trucking companies and to truckers need to be reassessed.

**Additional recommendations:**

1. **Review CDL training rules and regulations**

Federal regulations governing truck driver licensing should require more than ten hours of instruction, and should require trainees to spend some amount of time on the road behind the wheel of a big rig. The 2004 rule, issued by the Federal Motor Carrier Safety Association, which set a minimum of ten hours of training for obtaining a CDL, creates potential safety hazards.

   Among others, insurance companies have opposed this rule. In their effort to reduce claims and ensure safety, they require the trucking companies they cover to hire short-haul drivers with at least two years of experience. While this may reduce the number of inexperienced drivers on city streets, it helps to exacerbate the shortage of drivers during high demand months.

   Washington State regulators should look at CDL training rules to determine if the State can enact regulations that are stricter than those at the federal level.

2. **Explore the creation of truck stops**

Seattle currently has no truck stops. Creating new truck stops from the ground up provides an opportunity to capitalize on recent innovations in green technology. These truck stops could have electrical outlets where drivers could plug in and avoid idling their engines. They could offer biodiesel or ultra-low sulfur diesel (ULSD). Port officials and others in the freight movement system could use these locations to make information available to drivers. In addition, this would take trucks off city side streets overnight.

3. **Turnaround time at the terminal**

Terminal operators and the Port of Seattle have invested heavily in technological improvements designed to speed up the movement of freight at the terminals, from radio frequency identification tags to optical scanners to rubber tire gantry cranes.

   Academic studies are being conducted at the Ports of Los Angeles/Long Beach to determine the average time it takes for a truck driver to move through the facility, and to identify chokepoints in the system. Similar studies could be carried out at the Port of Seattle as a first step to solving some of these problems, either through technology investments or improving management processes, or both.
Appendix 1 Glossary of Trucking Related Terms and Acronyms

**Biodiesel**: A biodegradable transportation fuel for use in diesel engines that is produced through transesterification of organically derived oils or fats.

**Bobtail**: A commonly used slang term for the tractor or cab of a commercial truck.

**CMVSA**: The Commercial Motor Vehicle Safety Act of 1986, which established the minimum national standards which states must meet when licensing commercial motor vehicle drivers.

**Cargo**: Goods or produce being transported generally for commercial gain, usually on a ship, plane, train or truck; also referred to as freight.

**CDL (Commercial Drivers License)**: a license issued by a state, required to drive certain large cargo or passenger vehicles.

**Chassis**: A special trailer or undercarriage on which containers are moved over-the-road.

**Common carrier**: A transporter who holds himself out to the general public for the transportation of goods over a definite route and according to a regular schedule.

**Container**: An intermodal shipping unit that can move from ship to truck to rail without its contents being unloaded; also called a TEU.

**Diesel**: A petroleum-based fuel which is burned in engines ignited by compression rather than spark, commonly used for heavy duty engines including buses and trucks.

**Drayage**: Local hauling of cargo short distances, usually to or from a railroad yard.

**FMCSA**: The Federal Motor Carrier Safety Administration, established in 2000 within USDOT, which regulates the interstate trucking industry.

**Flip**: To move an intermodal container from one chassis to another.

**Freight**: Goods carried by a large vehicle; also referred to as cargo.

**Freight broker**: An intermediary company that makes arrangements with trucking companies for cargo to be transported from a ship to its final destination. Also referred to as a freight forwarder, expeditor or 3PL (third party logistics) provider.

**Hazmat**: Short for hazardous materials. Training and a special endorsement is required for commercial truck drivers to transport hazardous materials.

**ICC (Interstate Commerce Commission)**: The federal authority regulating trucking companies and drivers involved in interstate commerce. The ICC was dissolved in 1995 in the final stage of shipping deregulation, removing economic regulatory oversight from the railroad, trucking, and bus industries.
Motor carrier: A company that moves freight and cargo via truck; also referred to as a “trucking company.” Motor carriers hire truck drivers or contract with independent owner-operators.

Owner-operator: A commercial truck driver who owns his own truck and works on contract.

Port of Seattle: The municipal corporation that serves as landlord and economic development agency for the area’s marine terminals and airports.

Shipper: The company or individual who owns goods he wants moved from point A to point B.

Short-haul: Delivery of cargo over short distances. In this report, short-haul drivers include those who reported that they drive 1) primarily to railheads, 2) primarily within the Seattle area, and 3) primarily within Washington. See the Methodology section for further explanation.

Specialized freight: Freight that cannot be transported in a TEU and requires a specialized vehicle.

Steamship line: The shipping line that ships goods via ocean to and from seaports.

Terminal operator: the Company that leases terminal facilities from the Port and manages all operations there.

TEU: Twenty-foot equivalent container, the standard measure for an intermodal cargo container; often referred to as an intermodal container or simply a container.

Tractor: A truck designed primarily to pull a semi trailer by means of a fifth wheel mounted over the rear axle; also referred to as a “power unit,” “cab,” or “bobtail.”

Trailer: The part of the truck that carries the goods.

Trouble window: A service desk at the port terminal, where drivers take a container or shipment that has damaged equipment, incorrect identification numbers, or problematic paperwork to have the problem addressed.

Truck: A motor vehicle for transporting goods. Most trucks are built around a strong frame called a chassis. In this report, the term “truck” is used to refer to the vehicles driven by short-haul truck drivers and owner-operators.

Turn: A return trip.
Appendix 2 Truck Driver Survey

We are here today to ask truck drivers about their work. Most Americans think truck drivers make a lot of money. You can help us by answering the questions in this survey. Your answers will be used to create classes and other services to help truck drivers. Please do not write your name on the survey. Your information is private and anonymous. Someone will collect this from you at the outside gate when leave the terminal. Thank you for your help!

1. What work do you do the most? (check one):
   - □ Short haul (to railheads)
   - □ Delivery in the Seattle area
   - □ Delivery in Washington State
   - □ Over-the-Road (long haul)

2. About how many miles did you drive your truck last year? _________ miles

3. How many years have you worked as a truck driver? _________ years
   Or, if less than a year, _________ months

4. Did you do any other kind of work last year? □ YES □ NO
   If yes, what kind of work? ________________________________________________

5. Do you (check one):
   - □ Work as an employee driving trucks owned by the trucking company
   - □ Work for a driver who owns trucks, or
   - □ Drive a truck that you own (owner-operator)?

6. Do you own more than one truck? □ YES □ NO
   If yes, do other people drive these trucks for you? □ YES □ NO

7. Is this a year round, full-time job for you? □ YES □ NO

8. What work did you do before you became a truck driver?
   __________________________________________________

9. How long have you worked with your current company? _________ years

10. How many drivers work for that company? (check one)
    - □ Less than 25
    - □ 25-99
    - □ 100-249
    - □ 250-499
    - □ 500-1,000
    - □ More than 1,000
11. What do you think about truck driving? (check one)
   □ I want to be a truck driver for the rest of my working career.
   □ I’m thinking about doing some other kind of work someday.

12. If you’re thinking about doing some other kind of work, what kind of work is that?
   ________________________________________________________________

13. How are you being paid for your current trip? $________ per □ trip □ mile □ hour (check one)

14. Are you being paid a fuel surcharge for this trip? □ YES □ NO
   a. If yes, how much is it? _____________ per ______________

15. How many hours do you usually work each day (including waiting and other non-driving time)? ________ hours

16. How often do you sleep overnight in your truck
   □ A few nights a week □ A few nights a year
   □ A few nights a month □ Never

17. What time do you usually start work in the morning? ________ a.m.

18. How many turns (round trips) do you usually make in one day? ________ turns

**Now think about the time you spent working on your last trip (not this one).**

19. Where did you go on your last trip? From____________________ to ________________.

20. How many hours did your last trip take? ________ hours

21. How many hours on your last trip were waiting in line? For example, waiting to pick up or deliver a container, waiting in line to get ID verified, waiting in line to get into the port?
   □ ________ hours

**We would like to know about how much money you earn by being a truck driver. Remember, all information on this survey is anonymous and confidential.**

22. Approximately, how much was your last paycheck or take home settlement check? $______________

23. How many days did you work during that pay period? ________ days

24. Do you have a pension or retirement (e.g., 401K) plans? □ YES □ NO
25. Do you have health insurance? □ YES □ NO

26. If yes, who pays for your health insurance (check one)
   □ The company pays for my health insurance.
   □ I pay part and the company pays part.
   □ I pay for all my health insurance.

27. Do you own or lease your truck? □ OWN □ LEASE

28. If you own your truck, how much do you pay each month on your truck loan or lease? $__________

29. If you own your truck, what year was it built? _________________

30. If you own your truck, when will it be paid off? (What year?) ______________

31. Do you own more than one truck? □ YES □ NO

32. If so, how many trucks do you own? ________________ trucks

33. To the nearest thousand dollars, how much did you earn last year from your work after all your truck expenses were paid? $____,__________

Now we’d like to know more about you. All information is anonymous and confidential.

34. How old are you? __________ years

35. Are you Male or Female? □ MALE □ FEMALE

36. What is your marital status? Are you (check one):
   □ Married □ Divorced
   □ Live with someone but not married □ Separated
   □ Widowed □ Never been married

37. How many children do you have? __________ children
38. What is your race/ethnicity? Do you consider yourself (check as many as apply)
   □ White
   □ African American or African
   □ Asian-American/Pacific Islander or Asian
   □ Native American
   □ Hispanic/ Latino
   □ Something else  What? __________________________

39. Were you born in the United States?  □ YES  □ NO
   a. If not, what country are you from?  __________________________

40. What language do you usually speak at home?  __________________________

41. Are you a US Citizen?  □ YES  □ NO

42. What is the highest grade of education that you completed? (check one)
   □ 8th grade or less
   □ 9th-12th grade
   □ High school diploma
   □ Vocational or technical school
   □ Apprenticeship program
   □ Some college (no degree)
   □ Associate degree
   □ College or graduate degree

43. Did you go to truck driving school?  □ YES  □ NO

44. If so, what school was it?  __________________________

Thank you!
Appendix 3 Survey Results

Methodology

Port Jobs adapted this survey from Monaco and Grobar’s survey from “A Study of Drayage at the Ports of Los Angeles and Long Beach”.

Port Jobs employees administered the survey on 4/27/2006 at 6:00 am at Terminals 5, 18, and 46.

A minimum of two people from Port Jobs handed out the survey to truckers as they entered the terminal. Surveyors explained the purpose of the survey, and asked truckers if they would participate. Truckers were assured that surveyors and the survey had no affiliation with the Port, the terminal, or any unions. If truck drivers agreed to take the survey, they filled it out while waiting inside the terminal to drop off or pick up their loads, and returned the surveys on their way out of the terminal.

Surveyors handed out 277 surveys; 167 were returned. Two of the returned surveys came by mail. The overall “return” rate was 60% (167 of 277). Of the 167 surveys returned, five were blank, which gives a response rate of 58% (162 of 277).1

Some truckers declined to take the survey. Since it was available only in English (see Data Limitations and Interpretations section below), some truckers with more limited English skills may have been less likely to complete the survey. A few drivers refused to take the survey for other reasons.

Many respondents did not answer every question. In reporting the data for each question, we give the percent of those who answered the question.

Data Limitations and Interpretations

There are two limitations to the survey data:
1. Lack of clarity in answers, which might reveal a weakness in the survey design for certain questions, in particular, those relating to type of work and health insurance.
2. Bias, whether intentional or not.

Lack of Clarity
In some cases, respondents chose an answer that was inconsistent with their other responses. For example, a respondent may have chosen “long haul” as the type of work but indicated that he made an average (mean) of

---

1 For survey administration of this kind, this response rate is very acceptable; a 50% response rate is the minimum necessary for an unbiased sample.
five “turns” per day and drove only as far as Kent, WA, for his last trip. Such work would actually fall under the “delivery in the Seattle area” designation. Some respondents checked multiple answers, which the data analysis could not accommodate.

Limited English comprehension may have, in some cases, resulted in misunderstanding a question’s meaning. In responding to the two questions on health insurance (whether or not a person has insurance and if he does, who pays for it) some respondents reported they had no health insurance, but then indicated that they paid for all of their insurance. It appears that these respondents meant that they paid for all of their health care bills, not all of their insurance premiums.

**Bias**

A biased sample is a sample in which members of the statistical population are not equally likely to be chosen. As mentioned above, the survey was only available in English, yet the survey target population is largely foreign born (54%). As mentioned above, some truck drivers may not have taken or completed the survey due to limited proficiency in English. Consequently, the survey might under- or over-represent certain racial or ethnic populations.

**Interpretation**

Interpretation of the data was necessary when truckers gave a range of numbers where the survey design anticipated only a single number response. For example, when asked the usual number of “turns” made per day, a trucker might have reported making “four to six”. In this case, the information was entered into the database as the mean number of “turns” per day (e.g., five “turns” when four to six was written).

Some interpretation was required for the responses to questions regarding earnings, due in part to an intrinsic weakness in the survey question on annual earnings. Question #33 asked “To the nearest thousand dollars, how much did you earn last year from your work after all your truck expenses were paid?” For owner-operators, we assumed that their answers to this question were gross earnings less truck expenses. Since employee drivers do not pay for their truck expenses, we assumed that the employee drivers were reporting gross income. This contrasts with questions 22 & 23, which asked about last paycheck/settlement check. For employee drivers, we assumed that their reported paycheck amount was net after federal income tax and other payroll deductions.

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2 Bias is “3. d. (1) deviation of the expected value of a statistical estimate from the quantity it estimates (2): systematic error introduced into sampling or testing by selecting or encouraging one outcome or answer over others”. Source: “Bias”. Merriam-Webster Online Dictionary. <http://www.m-w.com/cgi-bin/dictionary/bias>.
Driver Demographics

Race/Ethnicity, Country of Origin, & Citizenship (Questions 38, 39, & 41)

As shown in Figure 1 below, 52% of the respondents were white, and 25% were African or African-American.

![Figure 1. Race/ethnicity (N=138)](image)

Of the 35 respondents who identified themselves as African/African American, only one was born in the United States. Africans thus comprised the largest single group of foreign-born truckers in our study (47% of those born outside of the United States). In all, 54% of those surveyed were foreign-born (Figure 2). By contrast, according to the 2000 Census, only 16.8% of King County residents were born outside the United States.4

Nearly three quarters of respondents were U.S. citizens. See Figure 3.

![Figure 2. Country of Birth (N=140)](image)

![Figure 3. Citizenship (N=153)](image)

3 N= the number of respondents who answered the question, n=the number of respondents who chose a particular response.
**Language** (Question 40)

Many (44%) respondents speak a language other than English in the home. There are 19 different languages spoken by the respondents. See Table 1.

<table>
<thead>
<tr>
<th>Language</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>71</td>
<td>56%</td>
</tr>
<tr>
<td>Punjabi</td>
<td>11</td>
<td>9%</td>
</tr>
<tr>
<td>Amharic</td>
<td>10</td>
<td>8%</td>
</tr>
<tr>
<td>Other African Language</td>
<td>7</td>
<td>6%</td>
</tr>
<tr>
<td>Tigrinya</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Spanish</td>
<td>6</td>
<td>5%</td>
</tr>
<tr>
<td>Other Eastern European language</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Russian</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>Arabic</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Farsi</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Garifuna</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Korean</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Samoan</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Language other than English (not specified)</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total (N)</strong></td>
<td>127</td>
<td></td>
</tr>
</tbody>
</table>

**Age & Gender** (Questions 34 & 35)

The mean age of truckers survey respondents is 43. This is similar to the average age in the trucking industry nationally. Thirty-eight percent of respondents are between the ages of 41 to 50, with 21% being 51 years of age or older, and 41% younger than 41 years of age. See Table 2.

<table>
<thead>
<tr>
<th>Age</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>43</td>
</tr>
<tr>
<td>Median Age</td>
<td>44</td>
</tr>
<tr>
<td>Mode</td>
<td>45</td>
</tr>
<tr>
<td>Minimum Age</td>
<td>21</td>
</tr>
<tr>
<td>Maximum Age</td>
<td>67</td>
</tr>
</tbody>
</table>

---

5 Respondents also reported speaking secondary languages in the home. Responses were English (n=14), French (n=2), Amharic (n=1), Hindi (n=1), and Spanish (n=1).

6 Other African languages reported were Oromo (spoken in Ethiopia and Kenya), Somali (spoken in Somali, Djibouti, Ethiopia, and Kenya), and Swahili (spoken in sub-Saharan Africa). Respondents also answered “African language,” “Eritrean,” and “Ethiopian” which are not official language names.

7 Tigrinya is an African language spoken primarily in Ethiopia and Eritrea.

8 Other Eastern European languages reported were Bosnian, Romanian, and Ukrainian.

9 Garifuna is spoken in the Caribbean Coast, Belize, Guatemala, Honduras, and Nicaragua.

10 The median is the middle number in a list of numbers, arranged from lowest to highest. The mean is the average of the numbers. The mode is a statistical measure of central tendency that refers to the value occurring most frequently in a set of data.

Truck driving continues to be a male-dominated industry. Only five percent of the sample is female, and this mirrors national truck driver statistics (Table 3). By comparison, in the United States workforce, 46% of workers are women.\textsuperscript{12}

<table>
<thead>
<tr>
<th>Table 3. Gender of truck drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male</strong></td>
</tr>
<tr>
<td>Survey</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Nationally\textsuperscript{13}</td>
</tr>
<tr>
<td>Male</td>
</tr>
</tbody>
</table>

Family Composition (Questions 36 & 37)

Nearly three quarters of respondents are married (64%) or are living with a partner (9%). See Table 4.

<table>
<thead>
<tr>
<th>Table 4. Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marital Status</strong></td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Live with Someone</td>
</tr>
<tr>
<td>Widowed</td>
</tr>
<tr>
<td>Divorced</td>
</tr>
<tr>
<td>Separated</td>
</tr>
<tr>
<td>Never Married</td>
</tr>
<tr>
<td>Total (N)</td>
</tr>
</tbody>
</table>

Seventy-three percent of respondents have children. Fifty-six percent have one to three children; the mean number of children was two. These results were very similar to the Monaco study. See Table 5 below.

<table>
<thead>
<tr>
<th>Table 5. Number of Children</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Children</strong></td>
</tr>
<tr>
<td>0</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4+</td>
</tr>
<tr>
<td>Total (N)</td>
</tr>
</tbody>
</table>

\textsuperscript{13} Global Insight, INC. “The U.S. Truck Driver Shortage: Analysis and Forecast”.
**Education (Question 42)**

Almost one-half of respondents (47%) had a high school degree or less; almost one-fifth of respondents (19%) did not finish high school. Twelve percent have a baccalaureate or post baccalaureate degree and five percent have an associate degree. See Figure 4 and Table 6, below.

**Figure 4. Highest education completed (N=140)**

![Image showing education levels]

**Table 6. Highest education completed**

<table>
<thead>
<tr>
<th>Highest Education Level</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤ 8th Grade</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>9th -12th Grade</td>
<td>22</td>
<td>16%</td>
</tr>
<tr>
<td>H.S. Diploma</td>
<td>39</td>
<td>28%</td>
</tr>
<tr>
<td>Voc/Tech School</td>
<td>20</td>
<td>14%</td>
</tr>
<tr>
<td>Some College</td>
<td>31</td>
<td>22%</td>
</tr>
<tr>
<td>Associate Degree</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>College/Graduate Degree</td>
<td>17</td>
<td>12%</td>
</tr>
<tr>
<td>Total (n)</td>
<td>140</td>
<td>100%</td>
</tr>
</tbody>
</table>

By contrast, within the general population of King County, 40% have a baccalaureate or post baccalaureate degree and only ten percent never received a high school diploma.14 Nationally, 47% of truck drivers have only a high school diploma and 26% did not finish high school. Twenty-seven percent have some college or a college degree.15

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15 Global Insight, INC. “The U.S. Truck Driver Shortage: Analysis and Forecast”. 

Driver Training (Questions 43 & 44)

Finally, the survey asked whether or not a respondent had attended trucking school. Attending trucking school is not a requirement to receive a CDL. Trucking schools teach defensive driving techniques, operating on the highway, in the city, or in heavy traffic conditions, and rules and regulations of the industry. In the sample from the Port of Seattle, more than half of respondents (63%) reported having attended trucking school. They identified many schools, of which South Seattle Community College (n=20) and Western Pacific Truck School (n=7) were named most frequently.

Type of Drivers and Type of Work (Questions 1 & 5)

The majority of respondents were local drivers\(^{16}\). Twenty-four percent reported primarily working short-haul to railhead (drayage), 29% reported primarily working in the Seattle area, and 40% reported working primarily regionally within Washington State. Only 7% of drivers in the sample drive long-haul. See Table 7.

All long-haul respondents have been removed for our analysis. Any references to short-haul after this point include short-haul to railhead; delivery in the Seattle area; and delivery in Washington state, unless otherwise stated.

The majority of truckers (61%) identified themselves as owner-operators, working as independent businessmen rather than as employees of a firm. Thirty-one percent are employee drivers, while the remaining nine percent of respondents drive for owner-operators. Seattle has a larger proportion of employee drivers than Los Angeles/Long Beach, where the Monaco study found that only 13% of drivers were employees of a firm.

<table>
<thead>
<tr>
<th>Table 7. Driver/Employment Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Short Haul</td>
</tr>
<tr>
<td>Seattle Area</td>
</tr>
<tr>
<td>WA State</td>
</tr>
<tr>
<td>Long Haul</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

\(^{16}\) Local refers both to truckers who drive between Port terminals and the railhead and those who drive in the Seattle area.
**Full-time truck drivers** (Question 7)
For the majority of respondents (88%), truck driving is a full-time job (Figure 5).

![Figure 5. Full-time workers (N=145)]

**Company Size** (Question 10)
All drivers were asked about the size of the company for which they drive. Figure 6 illustrates that most truck drivers work for firms with fewer than 99 drivers. Only three drivers work for companies with 250 to 1,000 drivers.

![Figure 6. Size of Company (N=143)]

**The Work Day**

**Hours worked** (Question 15)
The mean number of hours that respondents worked per day is 10.73 while the median is slightly higher at 11 hours per day (Table 8), although one driver worked only six and one-half hours and another worked 15 hours, on average, per day. Most drivers reported beginning their days between 4:00 and 7:00 am (85%).

![Table 8. Hours Worked per Day]

<table>
<thead>
<tr>
<th>N</th>
<th>142</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>10.73</td>
</tr>
<tr>
<td>Median</td>
<td>11.00</td>
</tr>
</tbody>
</table>
Number of turns per day (Question 18)
A “turn” is a round-trip from the starting destination to delivery point and back to the original starting point. The mean number of turns was 3.83 turns per day with a median of three and one-half trips per day. Some drivers averaged as many as ten or eleven turns per day. See Table 9.

Table 9. Average Number of “Turns”/Day

<table>
<thead>
<tr>
<th>N</th>
<th>138</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.83</td>
</tr>
<tr>
<td>Median</td>
<td>3.50</td>
</tr>
</tbody>
</table>

Terminal wait time (Question 21)
Table 10, below, indicates the amount of time truck drivers spent waiting at the terminal during their last trip. Forty percent waited between one and two hours and only two percent reported not having to wait at all (zero minute wait time). Few drivers (only 8%) waited fewer than 30 minutes at the terminal during their last trip. Seven percent of drivers reported having waited for more than three hours at the terminal, with one driver reporting waiting more than ten hours. The mode was one hour.

Table 10. Wait time at the terminal

<table>
<thead>
<tr>
<th>Wait time (1/2 hr segments)</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 min</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>1-30 min</td>
<td>9</td>
<td>6%</td>
</tr>
<tr>
<td>31-60 min</td>
<td>38</td>
<td>27%</td>
</tr>
<tr>
<td>1-1.5 hrs</td>
<td>30</td>
<td>21%</td>
</tr>
<tr>
<td>1.6-2 hrs</td>
<td>27</td>
<td>19%</td>
</tr>
<tr>
<td>2-2.5 hrs</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>2.6-3 hrs</td>
<td>17</td>
<td>12%</td>
</tr>
<tr>
<td>3-3.5 hrs</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>3.6-4 hrs</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>4-4.5 hrs</td>
<td>3</td>
<td>2%</td>
</tr>
<tr>
<td>10 Hours</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>N=141</strong></td>
<td>100%</td>
</tr>
</tbody>
</table>

Trip length (Question 20)
Length of last trip ranged from zero minutes to 18.5 hours. Figure 7 (next page) details the amount of time a driver’s last trip took. The mean trip length was four and one-quarter hours. The mode was two hours.
Proportion of drivers who sleep in their trucks (Question 16)
Eighteen percent of drivers surveyed sleep in their truck a few times a year while 13% sleep in their truck a few nights per week. But a large proportion, 63% of drivers, never sleep in their trucks.

The Trucks

Age of Trucks (Question 29)
Sixty-two percent of respondents drive trucks that are ten years old or older, and only six percent drive trucks less than five years old. See Figure 9.
Miles driven in 2005 (Question 2)
The mean number of miles driven by survey respondents in 2005 was 57,738 miles. Truck driver responses regarding number of miles driven in the past year ranged from 200 to 200,000 miles.

Truck financing (Questions 27 & 28)
Of the respondents, 83 respondents (88%) own their trucks, and eleven (12%) lease their trucks. Respondents reported paying an average of $710 a month on truck payments, with a range of $100 to $2,000. Local drivers (short-haul to railhead and Seattle area) reported an average monthly payment of $648, while Washington state drivers reported an average monthly payment of $808. See Table 11.

<table>
<thead>
<tr>
<th></th>
<th>WA State</th>
<th>Local Drivers</th>
<th>All Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>14</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>Mean</td>
<td>$808</td>
<td>$648</td>
<td>$710</td>
</tr>
<tr>
<td>Median</td>
<td>$750</td>
<td>$600</td>
<td>$600</td>
</tr>
<tr>
<td>High</td>
<td>$1500</td>
<td>$2000</td>
<td>$2000</td>
</tr>
<tr>
<td>Low</td>
<td>$295</td>
<td>$100</td>
<td>$100</td>
</tr>
</tbody>
</table>

Industry Tenure

Number of years driving (Question 3)
A majority of respondents (64%) have been in the industry ten years or less; 41% have been driving five years or less (Table 12). Overall, responses to the tenure in the industry question ranged from one month to fifty years. Only 36% of drivers have been in the industry more than ten years, with 8 drivers (6%) indicating that they had been driving for more than thirty years. The mean number of years in the industry is 11 with the most frequent response being two years.

<table>
<thead>
<tr>
<th>Time in Industry</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Month - 5 Years</td>
<td>60</td>
<td>41%</td>
</tr>
<tr>
<td>6-10 Yrs</td>
<td>33</td>
<td>23%</td>
</tr>
<tr>
<td>11-15 Yrs</td>
<td>20</td>
<td>14%</td>
</tr>
<tr>
<td>16-20 Yrs</td>
<td>7</td>
<td>5%</td>
</tr>
<tr>
<td>21-25 Yrs</td>
<td>12</td>
<td>8%</td>
</tr>
<tr>
<td>26-30 Yrs</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>31+ Years</td>
<td>8</td>
<td>6%</td>
</tr>
<tr>
<td>Total (N)</td>
<td>145</td>
<td>100.0</td>
</tr>
</tbody>
</table>

N= 145
Mean 11 Years
Median 7 Years
Mode 2 Years
Tenure with Company (Question 9)
Fewer than a third of respondents (31%) have worked for their current company for more than five years. Sixty-nine percent indicated that they had worked for their current company fewer than five years. Six respondents had been with their current company for less than one month. See Table 13.

<table>
<thead>
<tr>
<th>Time with company</th>
<th>(n)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Month - 5 Years</td>
<td>105</td>
<td>69%</td>
</tr>
<tr>
<td>6-10 Yrs</td>
<td>25</td>
<td>16%</td>
</tr>
<tr>
<td>11-15 Yrs</td>
<td>12</td>
<td>8%</td>
</tr>
<tr>
<td>16-20 Yrs</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>21-25 Yrs</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>26-30 Yrs</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>31+ Years</td>
<td>2</td>
<td>1%</td>
</tr>
<tr>
<td>Total (N)</td>
<td>152</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Career Choice (Question 11)
More than half of respondents (62%) are thinking about doing something else in the future other than driving a truck.

Earnings & Benefits
Method of Payment (Question 13)
Eighty-one percent of all respondents were paid by the trip; 15% were paid by the hour, and 4% were paid by the mile. Of owner-operators, 95% were paid by the trip, 4% were paid by the mile, and only one was paid hourly. Forty-six percent of employee drivers were paid hourly, 49% were paid by the trip, and five percent were paid by the mile. All drivers who work for an owner-operator earned by the trip. See Table 14.

<table>
<thead>
<tr>
<th>By the Trip</th>
<th>By the Mile</th>
<th>By the Hour</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>#</td>
<td>#</td>
<td>N</td>
</tr>
<tr>
<td>Owner-operator</td>
<td>76</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Employee</td>
<td>19</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>Drive for owner-operator</td>
<td>11</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>5</td>
<td>19</td>
</tr>
</tbody>
</table>

Last Paycheck/Settlement Check (Question 22)
Table 15 on the following page shows the amount drivers earned in their last paycheck/settlement check. Each reported paycheck/settlement check was divided by the number of days it covered to reach an average daily rate. The overall average daily rate was $228. The mode was $100 and the median was $180.
Table 15. Amount of last Paycheck/Settlement Check (Daily Rate)

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Owner-Operator</th>
<th>Drive for Owner-Operator</th>
<th>All Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>36</td>
<td>81</td>
<td>11</td>
<td>128</td>
</tr>
<tr>
<td>Mean</td>
<td>$139</td>
<td>$286</td>
<td>$104</td>
<td>$228</td>
</tr>
<tr>
<td>Median</td>
<td>$138</td>
<td>$210</td>
<td>$100</td>
<td>$180</td>
</tr>
<tr>
<td>High</td>
<td>$320</td>
<td>$750</td>
<td>$156</td>
<td>$750</td>
</tr>
<tr>
<td>Low</td>
<td>$33</td>
<td>$31</td>
<td>$75</td>
<td>$31</td>
</tr>
</tbody>
</table>

Annual earnings (Question 33)
Sixty-five percent of respondents earned $30,000 or less in 2005, and more than quarter earned less than $20,000. The mean earnings of respondents was $31,341 (Table 16) and owner-operators averaged $31,651. Annual earnings ranged from $7,000 to $100,000.

Table 16. Earnings by Employment Type

<table>
<thead>
<tr>
<th></th>
<th>Employee</th>
<th>Owner-Operator</th>
<th>Driver for Owner-Operator</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>7</td>
<td>75</td>
<td>1</td>
<td>83</td>
</tr>
<tr>
<td>Mean</td>
<td>$28,214</td>
<td>$31,651</td>
<td>$30,000</td>
<td>$31,341</td>
</tr>
<tr>
<td>Median</td>
<td>$26,000</td>
<td>$28,500</td>
<td>$30,000</td>
<td>$28,500</td>
</tr>
<tr>
<td>High</td>
<td>$48,000</td>
<td>$100,000</td>
<td>$30,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Low</td>
<td>$9,000</td>
<td>$7,000</td>
<td>$30,000</td>
<td>$7,000</td>
</tr>
</tbody>
</table>

Both mean earnings of the sample population as a whole and owner-operators were tested at an α=.05 with a resulting p-value of <.05.
Fuel Surcharge (Question 14)
Seventy-two respondents (56%) receive a fuel surcharge of some kind (Figure 11). Owner-operators make up 90% of those who receive a fuel surcharge. Fuel surcharges paid to drivers vary from firm to firm and driver to driver, and in the way the exchanges are calculated (e.g., by the trip, by the mile, a percentage of trip pay (e.g., 5% of $35), and percentage of gross).

Pension or Retirement Benefits (Question 24)
As seen in Figure 12 below, 81% of respondents have no retirement benefits. Only eleven percent of owner-operators and seventeen percent of those who drive for owner-operators have some type of retirement benefits, and 34% of employee truck drivers have retirement benefits (Table 17).
Health Insurance (Question 25)
Only 32% of survey respondents reported that they had health insurance; sixty-eight percent do not. However, owner-operators are much less likely to have health insurance than employee drivers (25% of owner-operators versus 47% of employee drivers). See Figure 13 & Table 18 below.

![Figure 13. Health Insurance by Employment Type](image)

Table 18. Health insurance by employment type

<table>
<thead>
<tr>
<th></th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Operator</td>
<td>75%</td>
<td>25%</td>
<td>85</td>
</tr>
<tr>
<td>Employee</td>
<td>53%</td>
<td>47%</td>
<td>45</td>
</tr>
<tr>
<td>Drive for Owner-Operator</td>
<td>67%</td>
<td>33%</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>68%</td>
<td>32%</td>
<td>142</td>
</tr>
</tbody>
</table>

Who pays for health insurance premiums? (Question 26)
Furthermore, the company pays all or part of the cost for nearly all the employee drivers with health insurance (90%), whereas owner-operators who do have health insurance shoulder the entire cost themselves. See Figures 14 & 15.

![Figure 14 Of respondents with health insurance, who pays the premiums?](image)
Drivers with both retirement and health benefits

More than half of the respondents (63%) reported having neither health insurance or a retirement benefit. Only 15% reported having both benefits. See Table 19.

Table 19. Drivers with Both Benefits

<table>
<thead>
<tr>
<th>Has Health Insurance</th>
<th>No Health Insurance</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>%</td>
<td>#</td>
</tr>
<tr>
<td>Has retirement benefits</td>
<td>21 15%</td>
<td>5 4%</td>
</tr>
<tr>
<td>No retirement benefits</td>
<td>25 18%</td>
<td>88 63%</td>
</tr>
<tr>
<td>Total</td>
<td>46 33%</td>
<td>93 67%</td>
</tr>
</tbody>
</table>
Appendix 4 Bibliography


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Appendix 5 Commercial Drivers’ Licenses

Prior to the passage of the Commercial Motor Vehicle Safety Act of 1986 (CMVSA), regulation of CDL licenses was left to individual states. As a result, problem drivers were able to maintain multiple licenses in different states, which allowed them to spread traffic convictions out among different “identities.” The CMVSA changed that, setting federal minimum standards that all states must follow in granting CDLs. Today, under federal law, commercial truck drivers may not have more than one CDL, and all states must register every individual to whom they grant a CDL in the national Commercial Driver's License Information System, which has operated nationwide since 1992.

The Federal Motor Carrier Safety Administration (FMCSA) in the U.S. Department of Transportation (USDOT) sets minimum standards for CDL licensure. In Washington, the Uniform Commercial Drivers License Act governs the administration of CDLs. As in most states, Washington law follows federal law closely.

CDLs are required to drive all of the following

- Single vehicles with a manufacturer's weight rating of 26,001 pounds or more;
- Trailers with a manufacturer's weight rating of 10,001 pounds or more, if the gross weight rating of the combined vehicle(s) is 26,001 pounds or more;
- Vehicles designed to transport 16 or more persons including the driver;
- Public school buses regardless of size; and
- Vehicles that carry placarded amounts of hazardous materials.

CDLs are divided into three classes: A, B and C. Each class is limited to a certain range of vehicles. In addition, endorsements are required for seven categories of specialized vehicles and freight, including tanker trucks and hazardous materials. Each endorsement requires specialized knowledge and testing. For example, a driver who has not gone through specialized training on the use of air brakes will be issued a limited CDL. Exceptions to CDL license requirements are made for farmers, firefighters and law enforcement, recreational vehicle operators, and certain military commercial drivers.

The Washington Department of Licensing is the administrative body that grants CDLs. In order to apply for a CDL or a Commercial Driver Instruction Permit (CDIP), a person must be at least 18 years old (21 if planning to drive across state lines) and have all of the following

- a Washington drivers license;
- a valid Social Security number; and
- a list of all states where the applicant had a driver’s license in the last ten years.
Vision screening and USDOT physical exam is required.

In Washington state, 2006 fees for CDL testing were as follows:
- Knowledge test: $10
- Skill test: $75 (maximum)
- Commercial Drivers License (new or renewal): $30
- Endorsement addition to an existing CDL: $10.

**Training Programs**

CDL training programs vary widely in price, duration, and curriculum, and are offered by both public and private educational institutions. Some institutions have CDL testers on staff. Some large trucking companies may have CDL training programs, and will cover some or all tuition if the student signs up to lease a vehicle from the company after finishing school. The Teamsters recommend driver-training courses certified by the Professional Truck Driving Institute (PTDI).

There are many different options for CDL training in and around Seattle. The most rigorous is at South Seattle Community College (SSCC), which has a 24-credit A.A.S. (Associate of Applied Science) Commercial Truck Driving Degree program. In addition to tuition, students must pay an additional $2,000 in fees. Two people at SSCC are certified to administer the CDL tests. Students are expected to achieve the following learning outcomes by the end of the program:

- Pass the required CDL knowledge test (written);
- Pass the CDL skills test (driving);
- Perform a vehicle inspection in an accurate, systematic sequence;
- Access and apply standards of industry and the Department of Transportation regulations;
- Demonstrate knowledge and practice safety on the road (DOT Road Test);
- Problem-solve road and traffic problems and apply appropriate driving techniques to safely manage changing driving conditions;
- Demonstrate basic competency in the use of technology to access the data for road conditions, repair information and to document travel;
- Describe employer expectations for employees within the trucking industry; and
- Identify career options and plan for own employment within the industry.

The Washington Construction Teamsters Apprenticeship Program includes six weeks of CDL training as part of its apprenticeship program. Other employers – including King County Metro – provide CDL training to employees hired to drive their commercial vehicles.
In 2004, FMCSA published its first rules setting minimum standards for commercial vehicle driver training. The rules set a federal minimum of ten hours of training for entry-level commercial motor vehicle drivers, but did not require that trainees receive actual any hands-on training behind the wheel. The Owner-Operator Independent Drivers Association (OOIDA), Public Citizen, Advocates for Highway and Auto Safety, and the United Motor Coach Association filed suit against the FMCSA, pressing for development of a driver-training rule that includes teaching people how to drive commercial vehicles. FMCSA’s rule is supported by the American Trucking Associations (ATA).

**Testing**

CDL applicants are tested on both knowledge (paper) and skills (behind the wheel). Federal standards do not require CDL applicants to demonstrate they are citizens or are legally present in the U.S., although this has been raised by the USDOT Inspector General as a problem. Under federal law it is the trucking company’s responsibility to ensure that their commercial drivers can read and speak English sufficiently to converse with the general public, understand highway and traffic signs, respond to official inquiries, and make reports and records. There is no requirement that state CDL testing and licensing include language proficiency tests.

In Washington, CDL knowledge tests are available in English and Spanish through DOL’s Automated Testing System. Group testing is available in Russian and Punjabi by appointment in certain locations. Tests needed for any other language can be administered through interpreters certified through the Department of Social and Health Services.

Washington is one of only seven states that rely entirely on third party providers to administer CDL exams. In King County, there are nine individuals at five different organizations (including South Seattle Community College and King County Metro) plus fifteen independent contractors certified to administer CDL tests. In Pierce County, there are ten individuals at four organizations (including Pierce Transit and Bates College) plus sixteen independent contractors who can administer CDL tests.

**Traffic offenses and CDLs**

Federal and state law are explicit and strict about the penalties for traffic offenses, such as reckless driving, driving under the influence of drugs or alcohol, failure to stop at rail crossings, fleeing the scene of an accident, and driving a vehicle without appropriate licensure. Some offenses are punished with temporary suspension of a CDL, while others can lead to an immediate and permanent loss of the CDL. All CDL drivers are required to notify their employers if a license is suspended, revoked, or cancelled, or if the driver is disqualified from operating a commercial
vehicle, within one business day of the notice of action. Moreover, a CDL driver must notify his employer of any traffic conviction within thirty days, whether it took place in private or commercial vehicle, and no matter in which state it occurred.

All trucking companies are required under federal law to have a drug testing program in place. All employees who must have CDLs to drive for them must be tested prior to employment and be included in a pool for random testing. Independent owner-operators are required to join a “consortium” in order to meet testing requirements. Drivers who drive part time as employees and part time as owner-operators must be in both the employee testing pool and in a separate consortium as an owner-operator.

USDOT’s Office of the Inspector General (OIG) has identified fraud in CDL testing and licensing as a significant problem nationwide. Suspected criminal activity dealing with CDLs has been identified in sixteen States since 1998. According to a 2002 audit by the OIG, 32 states utilize private, third party examiners to administer CDL exams.
Appendix 6 Organizing

Union organizers assert that the best way to keep the American freight system running and profitable is to make sure that all truck drivers earn good wages and benefits. Two ways to do this would be organizing these drivers into unions, or re-regulating rates paid for trucking services. Since 1999, the Teamsters have been involved in a nationwide campaign on multiple fronts to organize an estimated 40,000 port drivers across the U.S. and Canada. They contend that because trucking companies have so much control over the work done by owner-operators, many of those drivers are actually employees of the trucking companies.

New Jersey
In early 2004 Teamsters Local 11 in New Jersey filed a petition with the National Labor Relations Board’s (NLRB) Regional Office in Newark seeking to represent all owner-operator drivers working out of the shipment delivery terminal in Ridgefield. The regional director agreed with the Teamsters and ordered a union representation hearing. However, the company in question appealed the decision to the NLRB in Washington, DC, which reversed its regional director’s ruling.

Although the NLRB found many points on which those drivers could be considered employees, on balance it found that the company does not maintain enough control over owner-operators’ work to make them “employees” under the National Labor Relations Act. Determination of employee status is made on a case-by-case basis, so it is possible that in other instances the NLRB might come to a different conclusion.

Miami
In June 2004, a two-week protest effectively shut down cargo movement at the Port of Miami. In response, Teamsters Local 769 announced the opening of a hiring hall for truck drivers who haul containers from the Port of Miami, Port Everglades and local rail yards. In order to get work through the hiring hall, an owner-operator had to cancel any contracts with trucking companies and companies wanting to hire drivers from the hiring hall were required to sign a contract stating that the drivers were their direct employees.

The Teamsters reported that 500 of an estimated 1,200 owner-operators and eight companies had signed up with the hiring hall. However, employers did not hire significant numbers of these drivers, and this hiring hall is currently on hold.

Vancouver, BC
On June 25, 2005, about 1,000 owner-operators serving the Port of Vancouver in British Columbia walked off the job, citing increasing expenses and flat pay rates. The work stoppage was organized by the Vancouver Container Truckers Association (VCTA), an informal organization primarily
representing owner-operators. Three weeks into the walkout, Teamsters set up informational pickets at the Port of Seattle. The picket lines were honored by a number of drivers as well as by Local 52 of the International Longshore and Warehouse Union. The Vancouver walkout ended with the Canadian government creating a temporary licensing system that sets pay rates and fuel surcharges paid to drivers. These owner-operators have since formed a local of the Canadian Auto Workers union, something that is not legal under U.S. law because those drivers are independent businesspeople. The Canadian government plans to make the licensing and rate system permanent, a move opposed by the Port of Vancouver. In the summer of 2006, Canadian courts upheld the licensing and rate system as legal.

**Los Angeles/Long Beach**

In 2006, the Teamsters signed a six-year contract with Maritech Leasing, a harbor trucking company created for the purpose by Carrix, Inc. (parent company to SSA Marine), to represent container haulers at SSA’s Los Angeles/Long Beach operation. It is the first new contract between the Teamsters and a port trucking company in more than twenty years. The drivers will be Maritech employees and will drive company equipment. Maritech signed the contract – and agreed to remain impartial during any future organizing efforts by the Teamsters – in response to concerns about independent owner-operators who are, according to company President Bob Kelly, “leaving faster than the industry can replace them.”
Appendix 7 Trucking-Related Organizations and Associations

Regulatory and Related Agencies and Organizations

American Association of Motor Vehicle Administrators (AAMVA)

 Represents state and provincial officials in the U.S. and Canada who administer and enforce motor vehicle laws www.aamva.org

Commercial Vehicle Safety Alliance (CVSA)

 An association of state, provincial, and federal officials responsible for the administration and enforcement of motor carrier safety laws in the U.S., Canada and Mexico www.cvsa.org

Federal Motor Carrier Safety Administration (FMCSA)

 Oversees the interstate trucking industry, within the U.S. Department of Transportation www.fmcsa.dot.gov

U.S. Bureau of Transportation Statistics (BTS)

 Conducts data collection, analysis, and reporting to ensure the most cost-effective use of transportation-monitoring resources www.bts.gov

Washington Department of Licensing (DOL)

 The Driver Services Division administers the commercial driver's license programs www.dol.wa.gov/driverslicense/cdl.html

Washington State Patrol (WSP)

 The Commercial Vehicle Division ensures compliance with commercial vehicle regulations www.wsp.wa.gov/traveler/cvd.htm

Washington Utilities and Transportation Commission (WC)

 Regulates the rates, services, and practices of privately-owned transportation companies www.wutc.wa.gov

Trade and Related Organizations

American Trucking Associations (ATA)

 The largest trade association representing the trucking industry (motor carriers) www.trucking.org
International Brotherhood of Teamsters (Teamsters)

Represents truck drivers and other workers. The Port Division is currently working to develop a legal strategy to organize owner-drivers. [www.teamster.org/divisions/Port/port.asp](http://www.teamster.org/divisions/Port/port.asp)

National Association of Small Trucking Companies (NASTC)

An active association for small trucking companies with more than 1,700 members in the U.S. and Canada [www.nastc.com](http://www.nastc.com)

National Private Truck Council (NPTC)

Represents companies that own and operate their own truck fleets [www.nptc.org](http://www.nptc.org)

National Tank Truck Carriers (NTTC)

Trade association composed of approximately 180 trucking companies that specialize in the distribution of bulk liquids, industrial gases, and dry products in cargo tank motor vehicles [www.tanktruck.net](http://www.tanktruck.net)

Owner-Operator Independent Drivers Association (OOIDA)

Represents some 151,000 independent owner-operators across the U.S. and Canada [www.ooida.com](http://www.ooida.com)

Trucking Management, Inc. (TMI)

The national trade association representing unionized less-than-truckload (LTL) trucking companies, currently made up of five member companies. Formerly known as the Motor Freight Carriers Association [www.mfca.org](http://www.mfca.org)

Truckload Carriers Association (TCA)

Membership organization for long-haul trucking companies [www.truckload.org](http://www.truckload.org)

Washington Trucking Associations (WTA)

Represents the trucking industry in Washington State and its trucking company members [www.wtatrucking.com](http://www.wtatrucking.com)

**Other Relevant Organizations**

National Industrial Transportation League (NITL)

Represents transportation managers at major shipping companies [www.nitl.org](http://www.nitl.org)

Transportation Intermediaries Association (TIA)

A professional organization representing transportation intermediaries doing business in domestic and international commerce [www.tianet.org](http://www.tianet.org)
Appendix 8 Pollution Reduction Programs at the Port of Seattle

The following information has been provided by the Port of Seattle Environmental Services to give an overview of the pollution reduction programs at the Port of Seattle. This information is found at http://www.portseattle.org/community/environment/airsea. For more information, contact: Barbara Cole, Port of Seattle, PO Box 1209, Seattle, WA 98111, 206-728-3326, cole.b@portseattle.org.

**Cargo Handling Equipment Diesel Emissions Reduction Project** - The goal of this multi-faceted, collaborative project is to improve air quality by voluntarily reducing exhaust emissions from diesel-fueled equipment used by the Port of Seattle and its Seaport tenants. These vehicles include cargo handling equipment, onroad trucks and heavy-duty equipment.

- Implemented retrofits (retrofit, replace, repower, repair, refuel) for diesel-powered vehicles and equipment. Fleet selections are made in collaboration with Puget Sound Clean Air Agency and the equipment owners and/or operators,
- Purchased 169 diesel oxidation catalysts to retrofit cargo handling equipment. This represents all eligible cargo-handling equipment that is operated on the Port of Seattle container terminals,
- Encouraged voluntary use of cleaner and alternative fuels. SSA and APL switched their operations from high sulfur offroad diesel fuel to a 20% biodiesel and 80% low sulfur diesel blend; MTC switched their operations to ULSD fuel, and
- Implemented education and outreach programs to equipment owners/operators on strategies for reducing emissions.

**Collaborative Projects and Programs to Reduce Maritime Emissions** The following collaborative projects were also implemented:

- **Cruise Vessel Shore Power Project** - Most Princess Cruises and Holland America Line cruise vessels home ported in Seattle now turn off their engines and “plug in” while calling to the Terminal 30 Cruise Facility, effectively reducing emissions to zero while at the dock. Princess Cruises and Holland America Line have each built shore side electrical infrastructure on the terminal and retrofitted vessels to be shore power compatible. Juneau, Alaska is the only other cruise port in the world that offers shore power to cruise ships. Princess Cruises and Holland America Line partnered with the Port of Seattle, Puget Sound Clean Air Agency, EPA, and Seattle City Light to implement these projects.
- **Shore Power Provided at Terminal 91** - At Port of Seattle’s Terminal 91, shore power is provided to the various vessel types that berth there. For example, the large commercial fishing vessels that process fish in Alaska and make return trips to the area use shore power while at Terminal 91.
- **Cruise Vessel Seawater Scrubber Study** - The Port of Seattle is a partner on a study to determine the feasibility of using seawater scrubbers to remove pollutants from cruise ship diesel emissions. The Holland America Line's *MS Zaandam*, which will home port in Vancouver, B.C. in 2007, will test the seawater scrubbing equipment. This study is made possible with the generous assistance of a grant from the EPA/West Coast Diesel Collaborative and contributions from the Puget Sound Clean Air Agency and the Port of Seattle. Other funding partners in the study include: BP, Environment Canada, B.C. Ministry of the Environment, B.C. Clean Air Research Fund, and the Vancouver-Fraser Port Authority (Canada).

- **NorthWest CruiseShip Association Use of Low Sulfur Fuel** - The members of the NorthWest CruiseShip Association have committed to procure and use low sulfur fuel while at berth in Seattle and at sea in Washington, British Columbia and in Alaska waters. In support of this study, NWCA has received reports on fuel purchases from all the lines operating out of Seattle and reviewed those reports. The results show that the average sulfur content of fuel procured in Seattle was approximately 1.6% for the 2005 season. NWCA will continue to procure and burn low sulfur fuel while operating in the Pacific North West.

- **American President Lines** – American President Lines has committed to burning lower sulfur fuels in their vessel's auxiliary engines while at dock.

*Freight Mobility Emission Reduction Strategies* - The Port has implemented a number of emission reduction strategies related to freight mobility:

- Converted all Panamax and post-Panamax seaport cargo cranes from diesel to 100% electric.
- Initiated a radio-frequency identification (RFID) pilot project with SSA to equip 1,200-1,500 trucks with RFID tags and Terminal 18 with RFID readers, which will reduce gate wait times and improve terminal efficiency.
- Terminal operators have initiated cargo-handling equipment fleet modernization programs and are encouraged to purchase equipment with 2007 onroad standard engines.
- Redeveloped Seaport cargo terminals to increase efficiency, including improving nearby road networks.
- Coordinated draw bridge openings with truckers so they can route accordingly to minimize idling.
- Piloted computer tracking systems at cargo terminals to quickly locate containers and thus reduce truck wait times.
- Provided electric plug-ins instead of diesel units for refrigerated containers on the docks.
- Purchased bigger cranes to load and unload more efficiently, so ships are at the dock for less time.
- Partnered in a regional anti-idling effort.
Additional Seaport Air Quality Program Elements- Under its Seaport Air Quality Program, the Port of Seattle has:

- Switched to a 99% biodiesel – ULSD fuel blend for Seaport Maintenance fleet.
- Received grant from Washington Department of Ecology to retrofit all eligible heavy-duty diesel equipment at Seaport Maintenance with diesel oxidation catalysts.
- Installed Stage II Vapor Recovery Equipment, though not required, at the Seaport Maintenance refueling station.
- Made biodiesel available at the Shilshole Bay Marina Fuel Dock, and boaters are encouraged by the Port to use it.
- Encouraged cleaner vehicle purchases. A hybrid vehicle is used for high vehicle-miles-traveled mail runs between Port facilities, and the Seaport Environmental Program staff is replacing fleet minivans with hybrid vehicles.
- Implemented an award-winning employee trip reduction program.
- Built bike and pedestrian paths across and adjacent to terminals.
- Created programs to educate Port employees, tenants, and customers regarding actions they can take to protect air quality.
- Became an Airwatch Northwest Partner. Under this program people and organizations are alerted when air quality approaches levels that might lead to an exceedance of a National Ambient Air Quality Standard, and encourages further voluntary emissions reductions for the duration of the episode.
- Served in a number of organizations working collaboratively to reduce air pollution in the region:
  - Puget Sound Clean Cities Coalition Steering Committee
  - Mayor Greg Nickels, Seattle Climate Partnership (charter member)
  - Puget Sound Clean Air Agency Climate Protection Advisory Committee stakeholder process, co-chair
  - Clean Air Northwest Leadership Committee
  - Cascade Sierra Solutions Advisory Committee, working to address emissions from heavy-duty onroad trucks.