



Innovations in Urban Freight

Commercial Challenges for the Port of Seattle

February 6, 2011



Port of Seattle

Where a sustainable world is headed.™



Pier 90/91



Pier 86



Pier 66



Terminal 46



Terminal 30

Terminal 18

Terminal 5

T-5 On-Dock Rail



T-18 On-Dock Rail



BNSF (SIG - North)



BNSF (SIG - South)



UPRR (ARGO)



Top Containerized Commodities

Imports	TEUs	Exports	TEUs
Furniture; Fixtures	105,662	Animal Feed, Hay, Brewer Grain	64,309
Wearing Apparel	52,787	Paper; Carbon, Crepe, Stationary	63,199
Games, Sport, Toys	47,231	Vegetables	39,318
Footwear	33,914	Logs, Lumber, Wood	37,171
Auto Parts, Motor Vehicles	32,887	Fruit	18,012
Plastic Ware	20,897	Pulps, Cellulose, Chem Wood	12,186
Hardware	20,815	Foodstuffs, Pastes, Sauces, Soups, Bulk Barley, Corn, Oat, Wheat	11,916
Miscellaneous	20,708	Sorghum	11,264
Tires; Tubes	19,800	Meat	10,438
Electric Components	16,090	Soybean; Corn Soya Milk	8,672










***2010 PIERS Data in TEU's over Seattle**



COLOR KEY

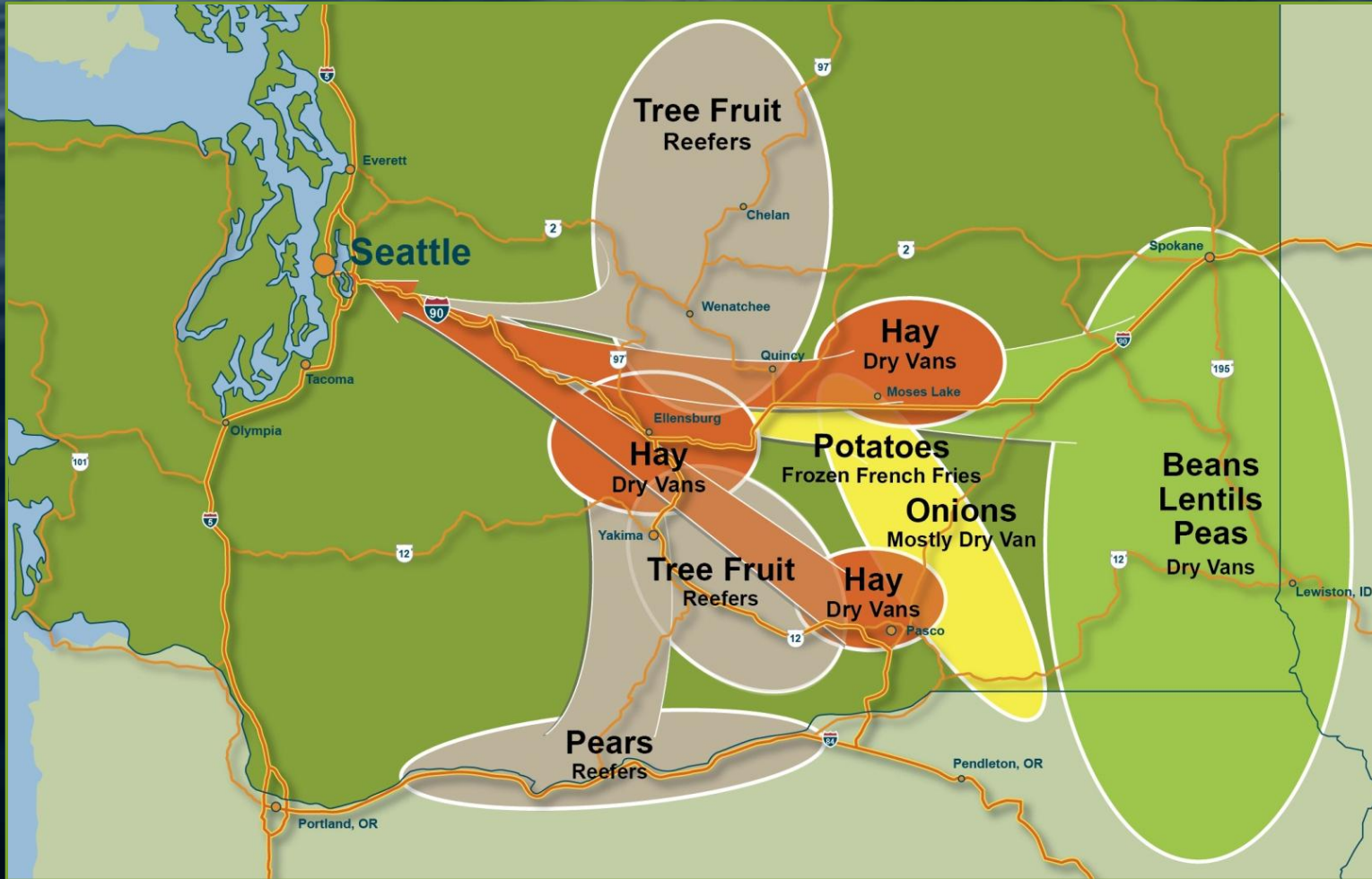
	Container Terminals		Cruise Facilities		Industrial & Commercial Properties
	General Purpose Marine/Cargo Terminals		Fishing/Workboat, Commercial & Recreational Moorage		

LEGEND OF MAP SYMBOLS

	Interstate		Recreational Moorage		Freeway
	State Highway		Public Shoreline Access & Parks		Primary Road
					Secondary Road
					Railroad



Washington Exports





Truck Access to Kent/Auburn Valley via SR-509/SR-167 as alternative to I-5.

Highest concentration of warehouses in Kent & Auburn area.

Warehouse, Distribution & Trans-load Facilities



Cargo Flow to Regional Warehouses



3 routes south out of terminal area:

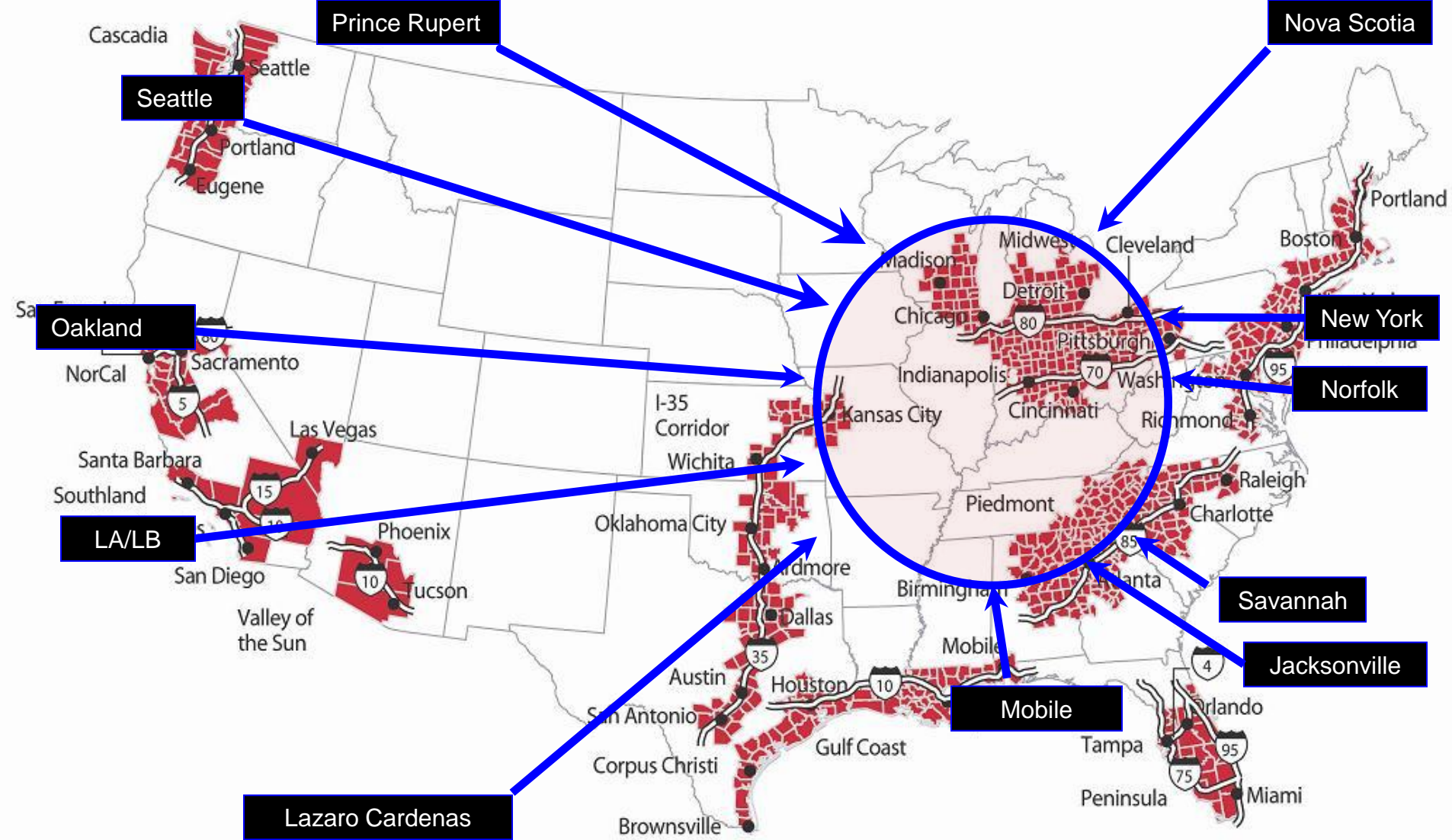
- West Marginal Way
- East Marginal Way
- I-5

Ample and reliable port trucking resources

Upgraded road infrastructure

Upgraded traffic signal timing & cameras

City	Miles/km	Time
Kent	16/26	25 mins
Auburn	24/39	25 mins
Sumner	31/49	45 mins



70% of our cargo moves inland. We face fierce competition for this market.

Canada's Gateway & Corridor Initiative Targets U.S. Midwest Cities



Ships are Getting Bigger

And we must handle them to remain competitive



ZIM Djibouti – 10,000 TEU's

Infrastructure for Large Ships



To handle large ships a port needs both deep draft and cranes that are tall enough and reach wide enough.

Infrastructure to support movement of containers after they leave the terminal is also needed.

INTERMODAL EFFICIENCY



A combination of on-dock and near-dock rail yards provide service for rail cargo but a challenge if competing with commuter traffic.

Container Capacity Growth Plan

2M

3M

3.5M

4M

5M

2005 volume = 2.1

Work Package #1 Underway

Work Package #2

Work Package #3

Work Package #4

TERMINALS

- T-30 Reactivate
- T-25 expansion to 16 acres**

RAILYARDS

- SIG North Expansion
- T-5 IY second shift

OFF-DOCK

- 20 acre third party container support

TRAFFIC

- SR-519
- T-5 surface street intersection
- EMW grade separation**
- Continuous day gate hours
- Spokane Street Viaduct**
- Viaduct Construction accommodates freight.**

TERMINALS

- T-5 increase internal CY**

RAILYARDS

- Wide span gantry cranes at Main SIG

MAINLINE

- Sound Transit/BNSF new track agreement Seattle to Tacoma**
- Crown Stampede Pass
- Duwamish Corridor Project

OFF-DOCK

- 20 acre 3rd party container support

TRAFFIC

- 1st Ave S. & E. Marginal Way
- Increase use of night gates.

TERMINALS

- T-5 RTG Ops

RAILYARDS

- On-dock IY at T-18 or 16th Ave conversion to IY.
- SIG Stacy Yard conversion.
- ARGO domestic relocation**
- ARGO re-designed for high density operations

MAINLINE

- Tukwila-Tacoma track.
- Sumner Connection
- Vancouver bypass**
- Ellensburg/Lind cutoff
- Point Defiance bypass**

OFF-DOCK

- 20 acre 3rd party support

TRAFFIC

- SR-509
- More night gates

Terminals

- T-5 18 acre expansion
- T-46 additional RTG ops

RAILYARDS

- SIG South expansion
- New remote railyard shared with POT

MAINLINE

- Could be constrained?

OFF-DOCK

- T25/30 off-site yard
- 40-acre 3rd party support

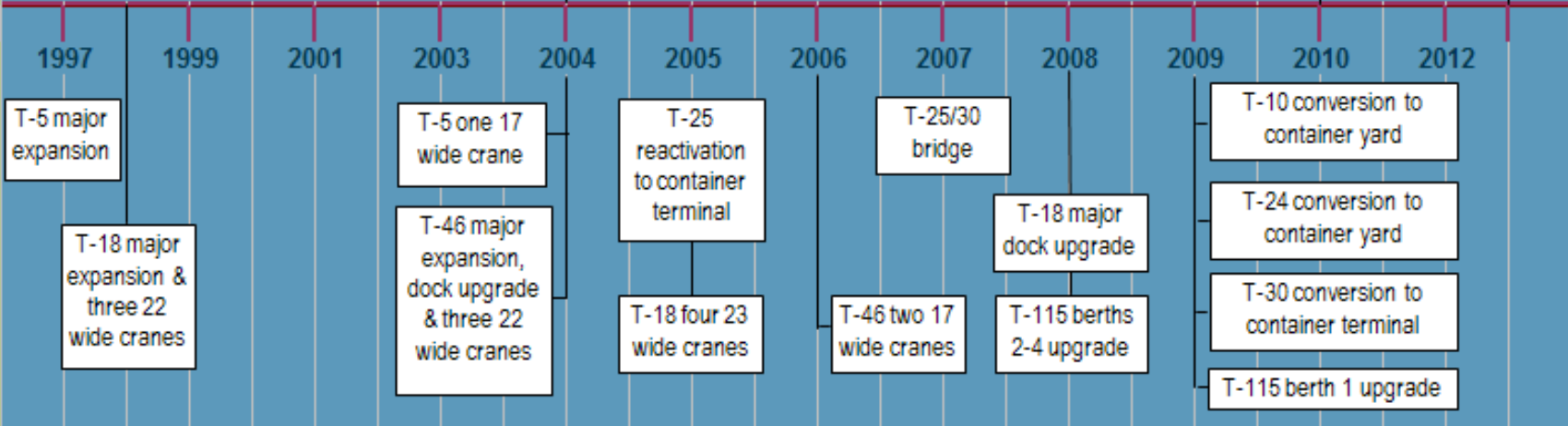
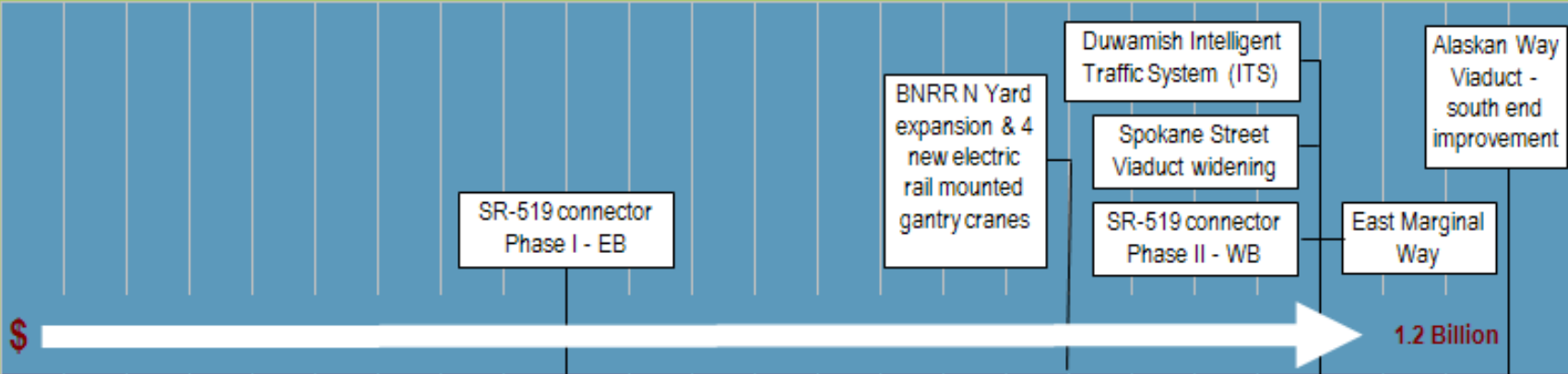
TRAFFIC

- Steady night gates.

Seaport Project Investment Timeline



Roads & Rail



Terminals

\$ 1.2 Billion



* Note: Not all planned construction in this geographical area is shown on the map below. This map shows data that is temporal in nature and is updated often.

Port Investments in Harbor Area Infrastructure

SR119: \$5.5m

Spokane Street Viaduct: \$10.45m

EMW: \$18m

Duwamish ITS: \$500K

AWV: \$300m

FAST: \$12.3m

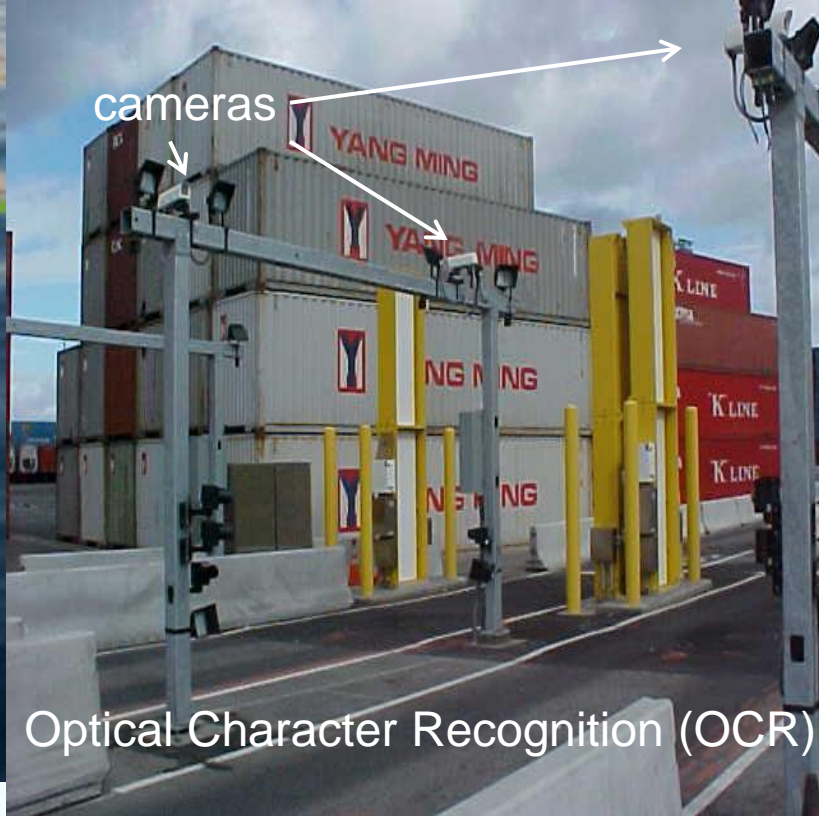
New Truck Ramp for Better T-46 Access



Terminal 46

Proposed Conceptual Design

Technology Improvements for Terminal Efficiency



Optical Character Recognition (OCR)



Rubber Tired Gantry Crane (RTG)



Radiation Portal Monitors (RPM's)



Radio Frequency Identification (RFID)



Vehicle & Cargo Inspection Station (VACIS)

Governor's Ports Initiative

2009 Legislation:

Defines Ports as Essential Public Facilities

Identifies key corridors in local & state transportation plans

Requires Marine Container Port Element in City Comprehensive Plans

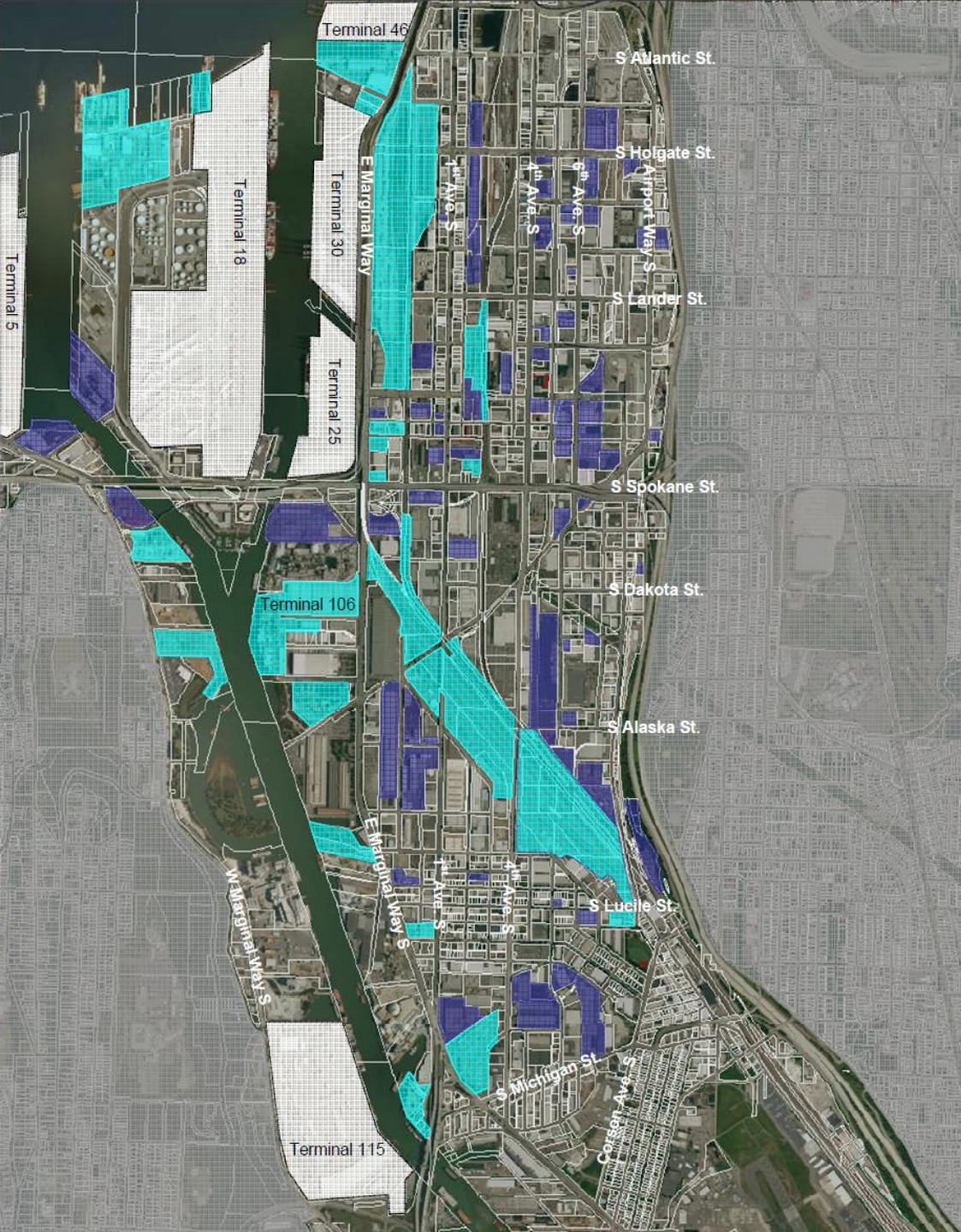
Manufacturing Industrial Center

Inventory of Businesses Linked to the Port of Seattle in the Duwamish Manufacturing / Industrial Center

WORKING DRAFT July 26, 2010

-  Businesses Engaged in Importing or Exporting
-  Services to Operation of the Port
-  Port of Seattle Cargo Terminals

Disclaimer: The information shown on this map is for planning purposes only. The Port of Seattle makes no warranties, real or implied, as to the accuracy of this information.



THE GREEN GATEWAY

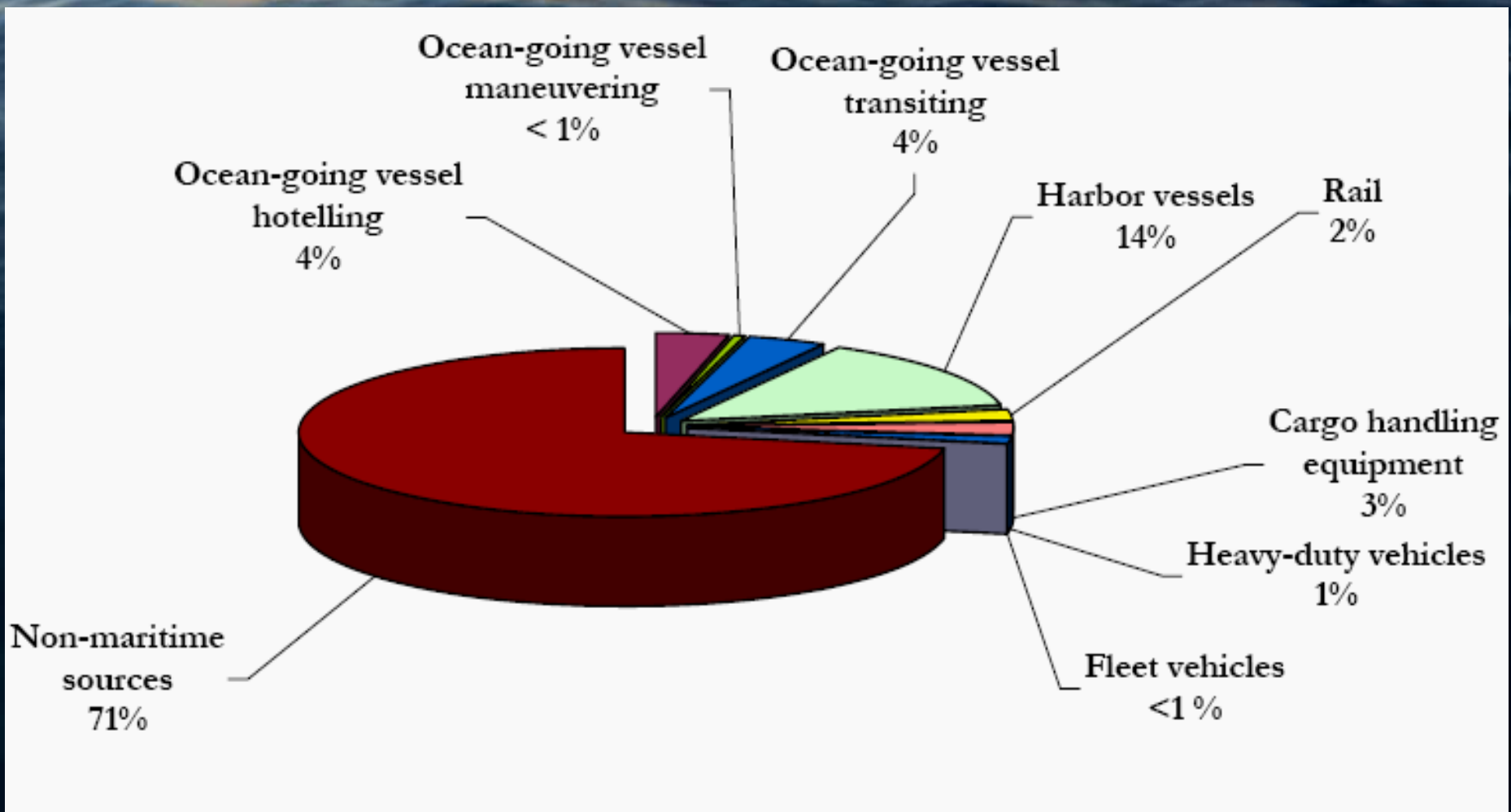


Seattle offers the lowest carbon footprint for cargo shipped by sea from Asia to major markets in the Midwest and East Coast.

Carbon Footprint Study for the North American Intermodal Market
Herbert Engineering Corporation 2011



2005 Diesel Particulate Matter Puget Sound Clean Air Agency Region



Update will be released in 2012

Ocean Going Vessels

Shore Power at 2 Cruise Berths

At-Berth Clean (ABC) Fuels incentive Program

- \$1200-\$2850 incentive for use of < 0.5% sulfur fuel in auxiliary engines
- 10 Participating Lines
- 2011: 303 Vessels (through 3rd Qtr)
- 2010: 400 Vessels
- 2009: 235 Vessels

Green Gateway Partners

Recognizes carriers for environmental vessel improvements over and above ABC Fuels.



Clean Truck Program

Our program was developed collaboratively with business stakeholders and successfully rolled out on January 1, 2011

- Model year 1994 or newer engines
- Terminal Operators administer
- Drayage Truck Registry
- 2007 or newer trucks by 2015



ScRAPs

- \$5,000 incentive to remove pre-1994 trucks
- 280 trucks scrapped and recycled
- Program sunset on 1/31/11





Pier 90/91



Pier 86



Pier 66



Terminal 46



Terminal 30

Terminal 18

Terminal 5

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T-18 On-Dock Rail



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Thank you!