

2009

Marine Cargo Forecast

Executive Summary

Prepared for

Washington Public Ports Association
and
Washington State
Department of Transportation

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Executive Summary

Overview

Washington sits astride a great international trade route. This valuable resource links our state to the world's economy. The investments we have made to maintain and strengthen this asset pay substantial dividends in terms of supply-chain efficiencies, shipping rates and access to emerging markets. In concert with the state's transportation system, our ports provide:

- Family wage jobs, especially in industrial and agricultural sectors.
- Transport of commercial goods at substantially reduced cost.
- Cost-effective access to global markets.

The purpose of the *2009 Marine Cargo Forecast* is to assess the expected flow of waterborne cargo through Washington's port system and to evaluate the distribution of cargo through the state's transportation network, including waterways, rail lines, roads, and pipelines. The study includes forecasts of trade opportunities by commodity and cargo type during the period beginning in 2008 and ending in 2030.

The forecasts are unconstrained, which means they do not consider limitations in infrastructure such as rail lines or roads. However, they do provide a qualitative assessment of these factors because meeting demand will inevitably require upgrades and investment, particularly in rail capacity.

Since 1985, the Washington Public Ports Association (WPPA) and Washington State Department of Transportation (WSDOT) have jointly conducted periodic cargo forecasts and performance assessments of the state's marine port transportation system. These reports are used as planning tools within the port community and related industries. They also alert state and local policymakers, as well as the public, to potential opportunities and constraints.

Previous versions of this study have been conservative or close to accurate across all cargo types. Container volumes for 2007, for instance, were within 3% to 4% of the 1995, 1999, and 2004 forecasts – an impressive degree of accuracy by almost any standard.

Economic opportunities on the Pacific Rim

The first section of the report assesses the prospects for the world economy with an emphasis on the state's principal trading partners in Asia. The state's dependence on Asia is difficult to overstate. Consider the following:

- 97 percent of containers imported to Washington come from Asia.
- 90 percent of containers exported from the state go to Asia.

This report analyzes each region or country to identify factors impacting those areas in the short term. That information is used to make long-term projections, and to inform cargo forecasts up to the year 2030. While economic recovery in the Pacific Rim is expected to remain depressed in the short term, trade will recover.

China is especially critical to Washington, as it is to other West Coast states. For many commodities, its importance has surpassed all other Asian countries. China's economy is

expected to continue growing and will be second only to the United States as a global economic power by the year 2018.

Washington's chief domestic trading partners – Alaska and Hawaii – are also included in the macroeconomic overview section of the report. Alaska's economy is driven by the petroleum industry and the federal government. Hawaii's is led by the tourism industry, but has a more diversified economy than Alaska. Both states are projected to grow slowly during the forecast period.

Trade opportunities in the Evergreen State

Washington State's public ports have experienced strong and steady growth during the past quarter of a century. For example, Washington ports have shown the following increases since 1982:

- Cargo volumes handled by longshore workers have tripled.
- Containerized cargo has increased fivefold.
- All cargo types have shown substantial gains, with the exception of timber.

Robust growth opportunities remain. The state's waterborne commerce is expected to expand at an average annual rate of 1.7% per year through 2030. Although growth will vary by commodity, there will be opportunities within all cargo groups. Highlights of the forecast include the following:

Containers are still the fastest growing cargo type. Although growth opportunities remain positive, our ports face substantial competition. Container traffic grew from nearly 2.9 million TEUs¹ in 2002 to nearly 3.9 million in 2007. Puget Sound containerized trade is projected to grow by an average of 4.1 percent per year in the forecast period, reaching 9.7 million TEUs in 2030.

Fully assembled autos will exhibit rapid growth. Auto imports are expected to grow rapidly to approximately 1.5 million units in 2030, up from 690,000 units in 2007. Competitive rail service will be essential to meeting this demand as three quarters of auto imports currently move to inland locations by rail.

Log exports will level off. After decades of decline, log exports are expected to level off and remain flat through the forecast period. The loss of log exports has affected many ports, which have responded with successful diversification programs. Many have found niche opportunities, such as wind energy equipment.

Breakbulk cargo volumes will grow slowly. Metal, forest products and other breakbulk cargo will grow slowly due to containerization and structural changes in the industries that produce these cargoes. Much of the expansion will occur as ports diversify. As a result, breakbulk traffic through

¹ Twenty-foot Equivalent Units (TEU): one TEU represents the cargo capacity of a standard shipping container 20 feet long and 8 feet wide.

Washington ports is projected to grow from 2.3 million metric tons in 2007 to around 3.0 million metric tons in 2030.

Grain shipments will expand. After increasing substantially in recent years, grain shipments will grow modestly in the face of significant domestic and international competition.

Dry bulk trends will continue. Some stalwart cargoes (such as alumina) have decreased while others (such as petroleum coke) have increased. These trends will continue.

Liquid bulk will shift from domestic to foreign. Both crude oil and petroleum products will shift from domestic to foreign sources as Alaskan production tapers off.

Transportation: moving goods to market over road, rail and water

An efficient transportation system that integrates road, rail and waterway transportation is essential to meeting our state's present and future trade opportunities. The report looks in depth at each of these modes, identifies their current state and lists projects that will be critical to meeting the state's future capacity needs.

Road

Road, highway, and on-terminal truck transport is critical to Washington's ports. Heavy, mid, and light trucks play important roles in cargo movement and goods distribution. Trucks overall comprise a relatively small portion of total road and highway traffic in the urban regions of the state. While truck traffic is expected to grow between now and 2030, auto traffic will increase even faster. In light of this competition for scarce resources, the challenge will be to protect the functionality and reliability of the system for truck transport. Road capacity development will be critical for continued economic growth.

Rail

Trade prosperity in our state is directly linked to the level of rail capacity serving our ports. About 40 percent of the state's rail traffic is related to port activity. The amount of cargo moving to our ports by rail is forecast to increase from the current 42 million tons to 65 million tons in 2030. The state's ability to meet this opportunity will depend on the investments state leaders make to expand and improve rail operations and infrastructure.

The state rail system consists of the mainline system and several short-line operations. The mainline system is the primary inland transportation component for large-volume import and export cargo moving through our ports. The short-line network consists of many small local railroads, many of which evolved as the state's rail network experienced system-wide contractions, and low-density feeder lines were abandoned by mainline operators.

Washington's mainline rail system is comprised of two competing railroads: the Burlington Northern Santa Fe (BNSF) and the Union Pacific (UP). Both operators have invested in improvements and upgrades to their mainline systems, including new locomotives, new traffic control systems and substantial mainline rail bed improvements.

In general, the key mainlines are able to accommodate existing levels of traffic, but are experiencing capacity limitations during peak traffic conditions. Infrastructure improvements and operational changes will be needed to accommodate projected growth in freight and passenger traffic, and to keep the state's mainline rail services competitive. The report includes a review of recent rail system enhancements and provides a complete description of mainline routes, including the north-south corridor along I-5, and the east-west routes along the Columbia River and over the Cascades.

The following projects, reviewed in detail in this report, have the highest priority and should be undertaken within the next eight years (by 2017):

- Vancouver, Washington Freight Rail Bypass.
- Point Defiance Bypass from Tacoma to Nisqually.
- Partial third main line from Kalama to Kelso.
- Port of Vancouver USA West Freight Access Project.
- Siding extensions at Mount Vernon and Stanwood, new siding at Swift.
- Blakeslee Junction at Centralia.
- High Speed Crossover Plan from Nisqually to Centralia.
- East Marginal Way Grade Separation and Duwamish Rail Corridor at Seattle.
- Bullfrog Junction Realignment at Tacoma.

Additionally, several major projects should also be considered in the long term, including the following:

- Construction of a third line to the full extent between Martin's Bluff and Rocky Point along the Kelso-Vancouver (WA) route.
- Clearing of Stampede Pass to accommodate double-stack rail cars.
- Construction of an Ellensburg-Lind "cutoff" along the old Milwaukee Road corridor.
- Completion of the "Bridging the Valley" project between Spokane and Athol, Idaho.

Waterways

In addition to road and rail transportation, our state's waterways are critically important to international and domestic trade. The Columbia-Snake River navigation system allows Washington-grown agricultural products to move from farm to market, and provides price competition between modes of transportation. Puget Sound and the Washington Coast are vital to domestic barge trade as well as international trade.

The Columbia River deepening project will significantly benefit Washington and Oregon ports along the Lower Columbia by creating transportation cost savings and reducing transit times of larger ocean vessels now in service. This final piece of the long-delayed deepening of Lower Columbia ship channel is about to be completed.

From harbors in Puget Sound to dams on the Snake River, our waterways are integral to Washington's economy. Future challenges related to channel deepening, maintenance dredging and potential dam breaching must be addressed to preserve the viability of the system.

Challenges on the horizon

Washington's public ports provide economic security, opportunity and diversity to our local communities, to the state as a whole, and to the surrounding region. If we invest wisely in transportation and port infrastructure, trade will continue to flow through the state and deliver tremendous opportunity in the next two decades and beyond.

Every ship that calls in Washington provides greater choices and better prices for consumers, but it also creates opportunities for all Washingtonians: farmers who must move their crops to markets overseas; manufacturers who rely on inbound shipments for parts and materials; and countless innovators who ship their high-demand products cheaply and efficiently around the world.

Our ability to cultivate new opportunities will depend on the investments made today and tomorrow. Although Washington has many assets – rich farm land, intellectual capital, a quality work force – the cargo we send to the global marketplace is discretionary. It can move through alternative gateways, so we must compete aggressively to ensure our trade route is preserved.

Competition is especially fierce from ports in Southern California and Western Canada. Southern California is especially attractive to shippers because its large population base forms one of the planet's greatest retail marketplaces. Canada's government increased the competitiveness of its ports with a multi-billion dollar effort to attract trade with Asia, improving the Port of Prince Rupert and Port Metro Vancouver, as well as rail infrastructure between Canada's West Coast and the U.S. Midwest.

Other factors threaten our state's discretionary trade. For example, when the Panama Canal expansion is completed in 2014, the route's vessel capacity will double. This will allow more ships to bypass the West Coast entirely, choosing instead to take their cargo directly to East Coast ports in closer proximity to major U.S. population centers.

The key to maintaining and expanding our place in the global economy is to continue investing in our trade route – beginning with an efficient, cost-effective rail system. Our state's participation in trade brings with it thousands of jobs and greater collective wealth, but it also requires investment. If we make wise choices now, our state stands to benefit from the growth on the horizon for Washington's port transportation system.