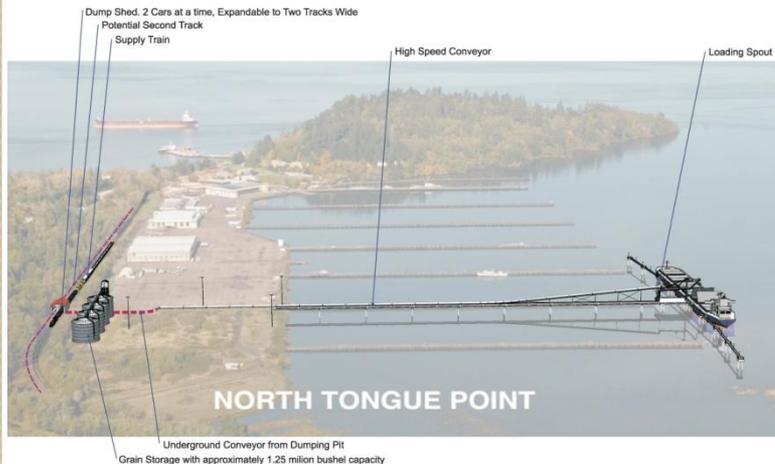


Port Investment Opportunities in Astoria, Oregon USA

Prepared for the
Ministry of Land , Transport and Maritime Affairs

October 17, 2011

Mr. Larry Pfund, Port Commissioner
Mr. Jack Crider, Executive Director
Port of Astoria



Outline

- Steps completed
- Current operations
- Market analysis
- Future steps

Steps Completed

Official Visit to Busan Introduction of the Port of Astoria

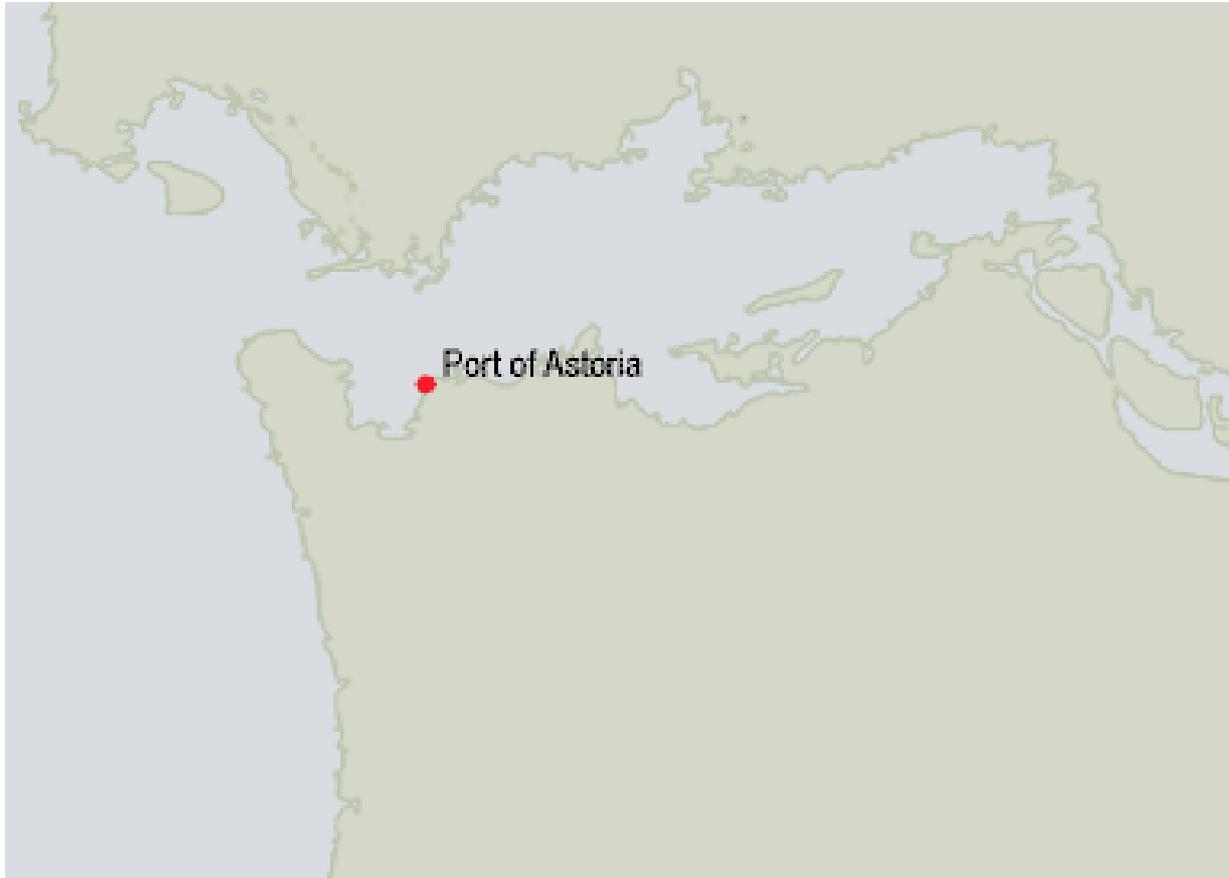
October 2010
Busan Port Authority



Introduction to the Port of Astoria



Located at the mouth of the Columbia River at Rivermile 13



Central Waterfront Piers 1, 2 and 3 Serve the Maritime Community



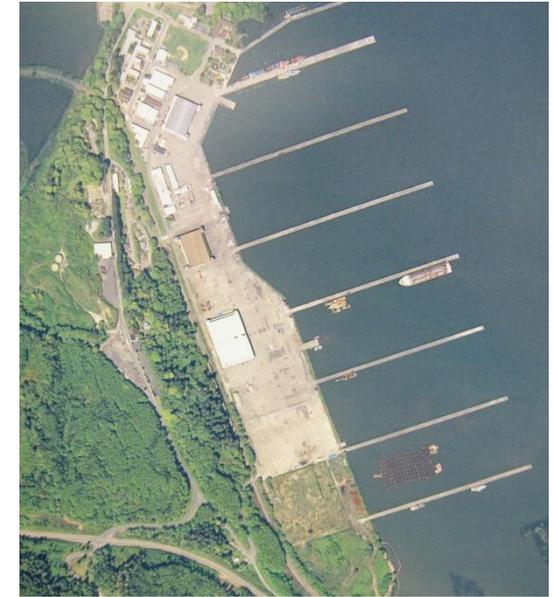
Pier I



- For cruise ships, general cargo, military and industrial vessels
- Modern concrete dock accommodates vessels up to 1,100 ft.
- 40 ft depth, 16 ft pier height
- Yokohama Fender System
- Modern pier facilities (800 ppsf load capacity)
- 5 acres of additional upland staging area
- Fully paved, lighted, utilities, phone, courtesy phones for crew
- Gangway: 5 ft. wide x 76 ft. long or 4 ft. wide x 50 ft. long

North Tongue Point

- North Tongue Point
- Five 1,500 ft finger piers
- 130,000 sf warehouse facility
- 80 acres of submerged land
- 10 acres of undeveloped land
- 30 acres of tarmac



First Log Ship Loaded

Bound for Busan, South
Korea



2nd Official Visit to Busan



In November there was the arrival of the log ship & the signing of a sister port agreement



Log/Lumber Vessel Calls

Date	Vessel	Board Feet
10-Nov	Santa Pacifica	1,050,000
10-Dec	Santa Francisca	1,950,000
11-Feb	Santa Francisca	2,050,000
11-Feb	Tampa Bay	4,520,000
11-Mar	Port Alice	2,490,000
11-Mar	English Bay	2,270,000
11-Apr	Kestrel	5,270,000
11-May	English Bay	2,180,000
11-May	Eastern Asia	5,100,000
11-Jun	Leo Forest	5,200,000
11-Jul	Great Reward	4,900,000
11-Aug	Global Prosperity	5,150,000
11-Aug	Ocean Hope	1,880,000
11-Sep	Lupinus	5,060,000
11-Oct	To be named	5,000,000
<u>Log/lumber Ships by Fiscal Year</u>		
2010-2011 (actual)		15
2011-2012 (est)		28
2012-2013 (est)		40
2013-2014 (est)		60

Market Analysis

Market Analysis Overview

- BST Associates analyzed cargo markets for the Port's Strategic Business Plan
 - Log exports were identified as a potential cargo
 - Log exports are now growing strongly
 - Grain exports were also identified as a potential
- BST Associates was retained to conduct a preliminary analysis of grain exports
 - Grain exports from Pacific Northwest ports are projected to continue strong growth
 - Columbia River ports handle the majority of Pacific Northwest grain exports
 - Most moves by rail from the Midwest

Key Questions

- Need for project
- Advantages to Astoria
- Operations and management models
- Capital requirement
- Financial considerations

Need for Project

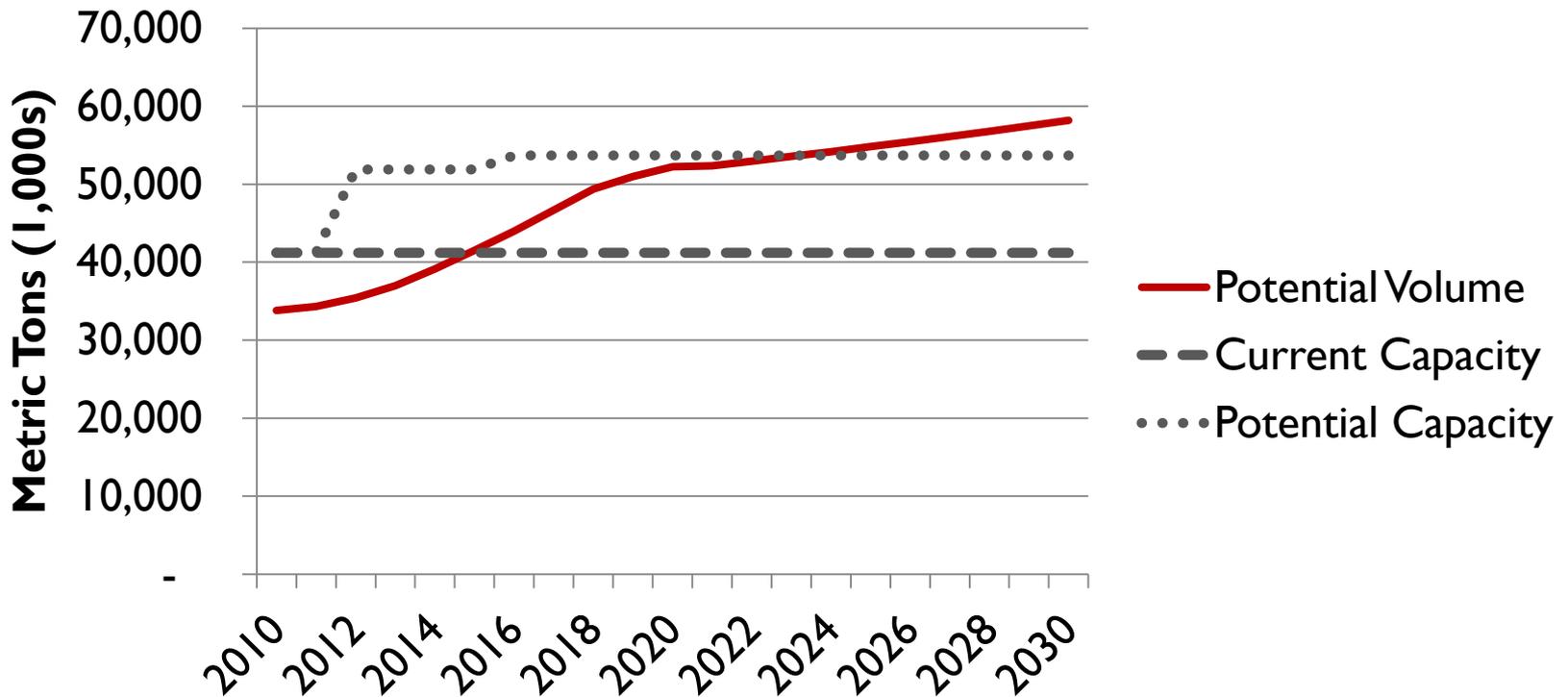
PNW Export Elevator Capacity

Region	Facility Name	2011 Capacity (Metric Tons)	Planned Capacity (Metric Tons)
Seattle	Louis Dreyfus	6,000,000	6,000,000
Tacoma	TEMCO	6,000,000	6,000,000
Cherry Point	Gateway Pacific	0	4,000,000
Longview	EGT	8,000,000	8,000,000
Kalama	Kalama Export	8,000,000	10,000,000
Kalama	CHS Kalama	2,000,000	6,000,000
Vancouver	United Grain	4,000,000	5,500,000
Portland	Cargill Irving*	1,100,000	0
Portland	Columbia Grain	3,500,000	6,000,000
Portland	Louis Dreyfus*	1,100,000	0
Hoquiam	AGP	1,000,000	2,200,000
Total		40,700,000	53,700,000

* terminals assumed to be phased out (potential supplier for Astoria?)

“Planned Capacity” includes projects currently underway

PNW Grain Export Forecast



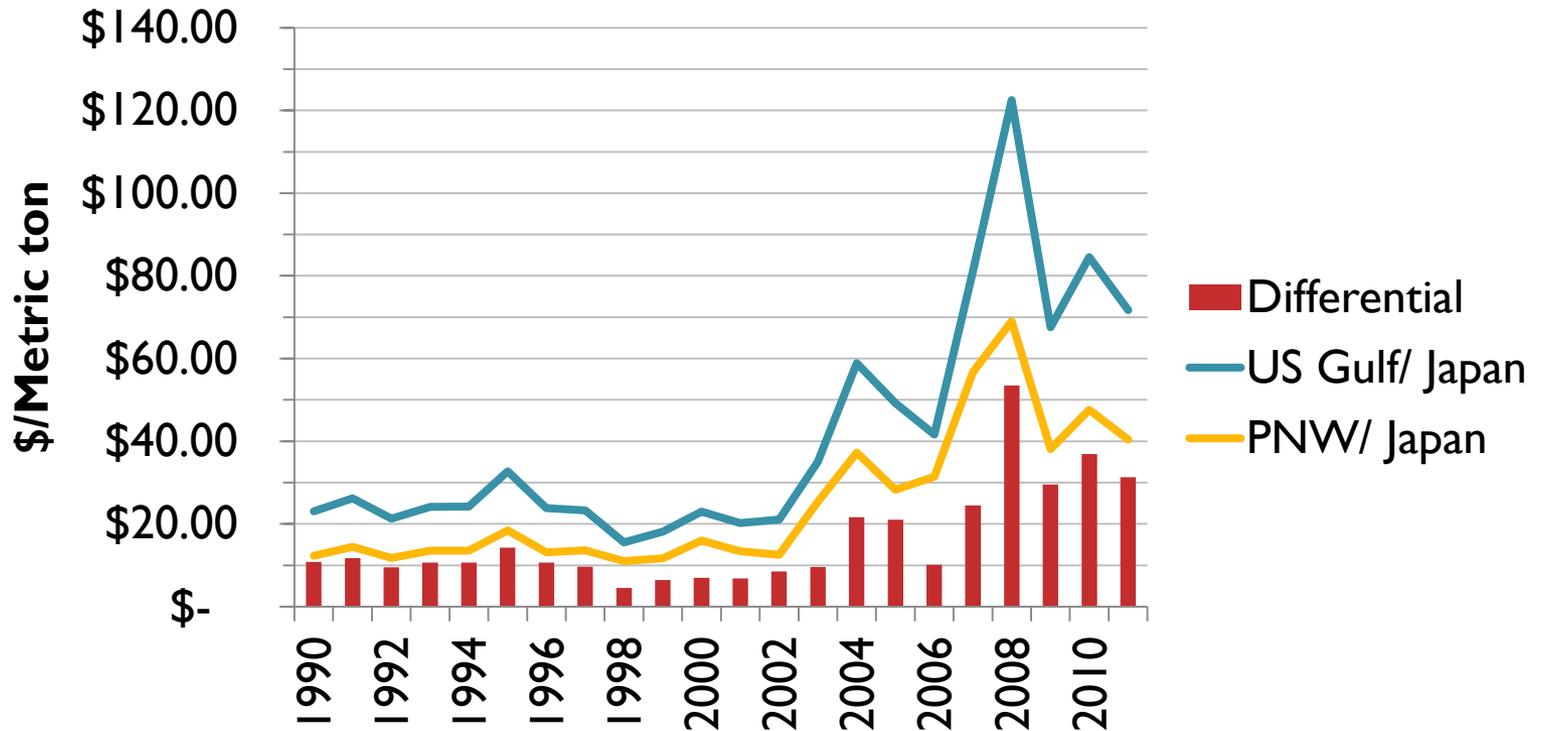
- Under high growth forecast, current capacity is reached in 2015
- If all planned expansions occur, capacity is essentially reached in 2020
- Opportunity to introduce a lower cost operation in existing market
- Access to new markets (i.e., North Korea)

Advantages to Astoria

Advantages to Astoria

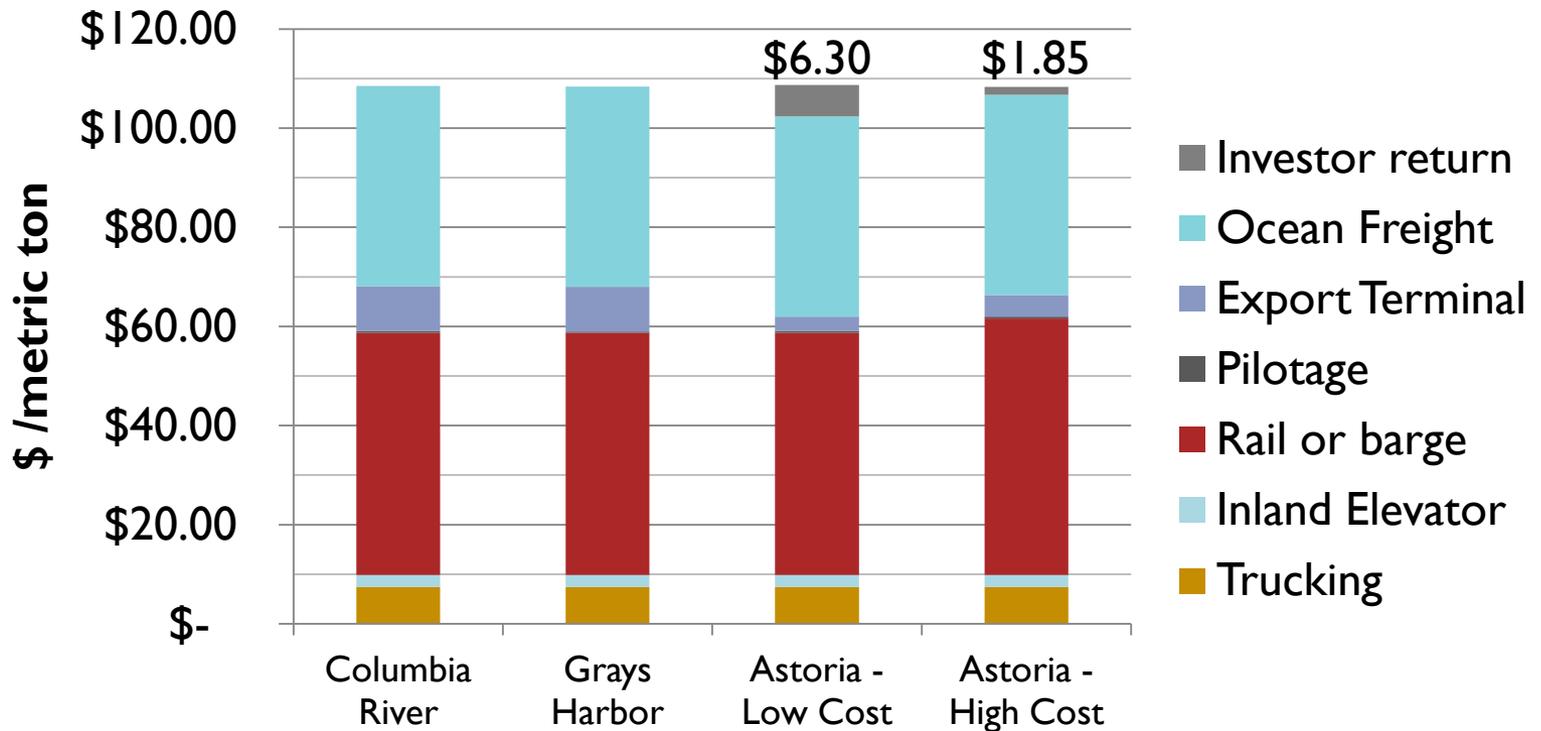
- Discounted tariff rates
- Land cost half that of upriver ports
- Less congestion
- No wait for anchorage (currently 2-4 days upriver)
- Less vulnerable to reduced funding for channel maintenance dredging
- Ships calling at upriver ports are limited by 43-foot channel – may be able to top off at Astoria
- Lower ship costs – fuel, travel time
- No river pilot cost
- Other commodities available – logs, lumber, sand, seafoods

Comparison of Ocean Freight Rates



*Advantage to PNW elevators over US Gulf
Ocean freight accounts for higher share*

Advantage to Astoria



Depending on terminal costs and rail rates, \$1.85 to \$6.30 per metric ton could be available to investors

Comparison of Transportation Costs (per metric ton)

	Existing PNW Terminals	Astoria (low estimate)	Astoria (high estimate)
Inland transportation	\$59.10	\$58.90	\$61.80
Export terminal	\$9.00	\$2.90	\$4.35
Total	\$68.10	\$61.80	\$66.15
Margin available to investors		\$6.30	\$1.85

Estimated Annual Throughput Required

	Low Margin	Break Even	Mid-Range Margin	High Margin
Metric tons per vessel	50,000	50,000	50,000	50,000
Rate per metric ton	\$1.85	\$2.75	\$4.09	\$6.30
Debt service*	\$5.5 mil.	\$5.5 mil.	\$5.5 mil.	\$5.5 mil.
Metric tons required	2.97 mil.	2.00 mil.	1.35 mil.	0.87 mil.
# of vessels required	59	40	27	17
Return on investment	(\$1.8 mil.)	-	\$2.7 mil.	\$7.1 mil.

* Note: based on current assumption of \$100 million investment for 20 years at 1.0% interest

Operations and Management Models

Operations & Management

- Examples

- Grays Harbor, Longview, Kalama (Harvest States)

- Property is leased from Port
- Tenant owns improvements

- Kalama (Kalama Export)

- Tenant owns land
- Tenant owns improvements

- Seattle, Tacoma

- Property is leased from Port
- Improvements are leased from Port

- Astoria

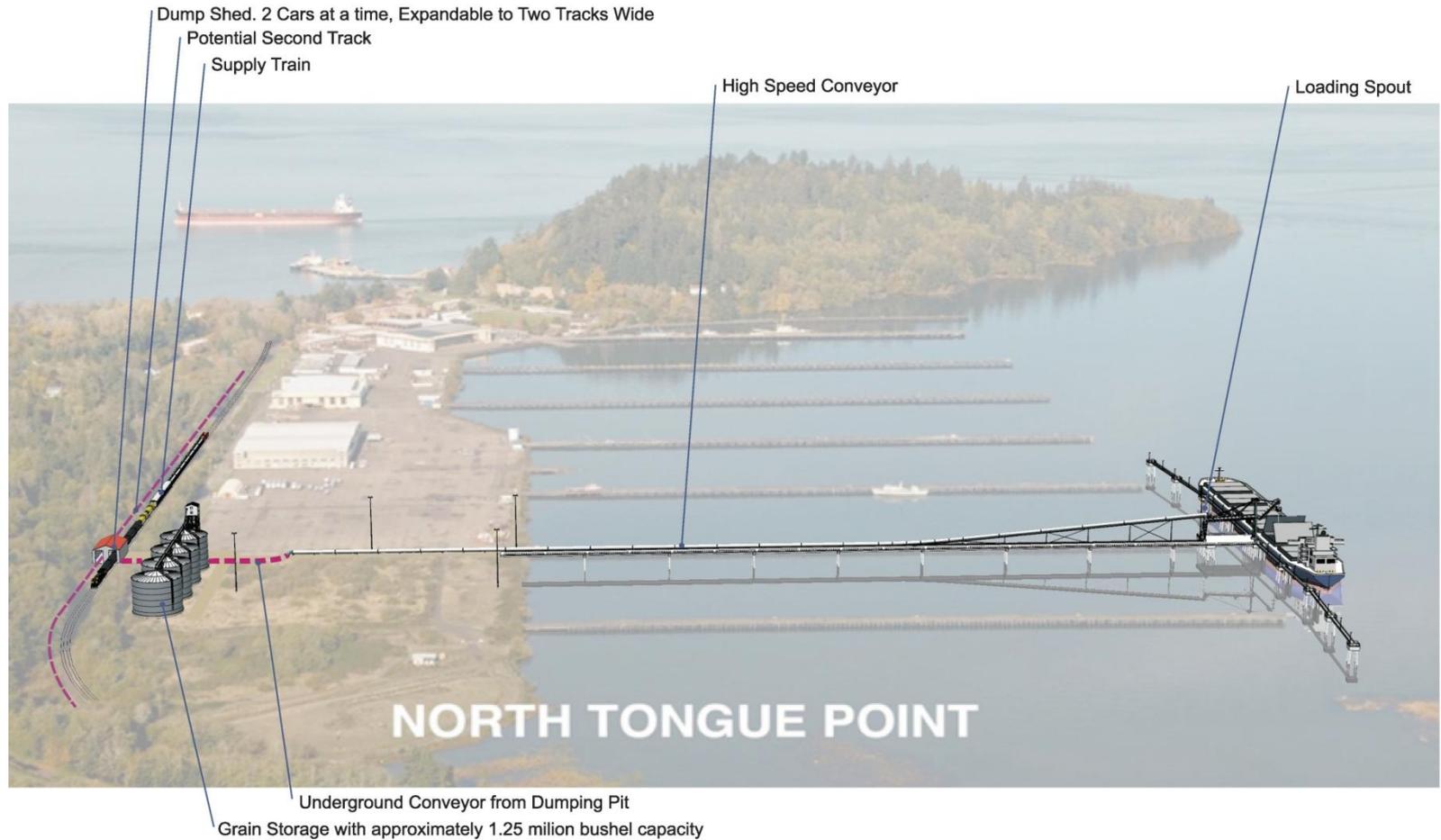
- Property & dock leased from Port
- Tenant owns improvements
- Public/Private partnership

Capital Requirement

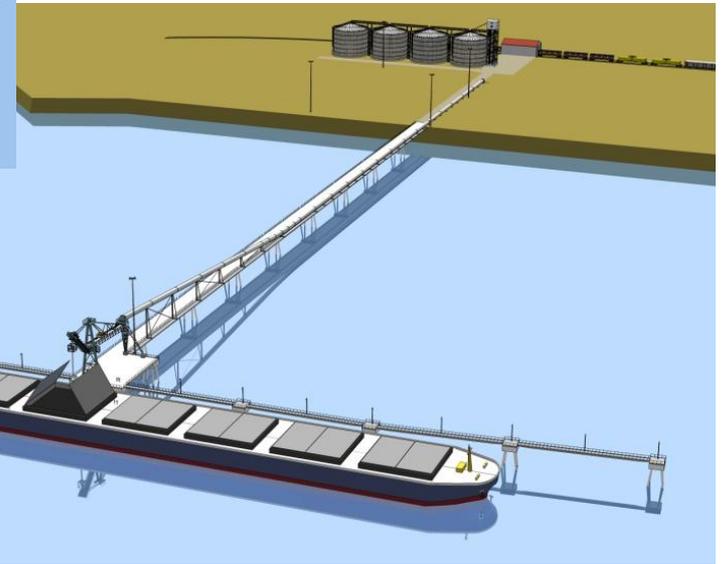
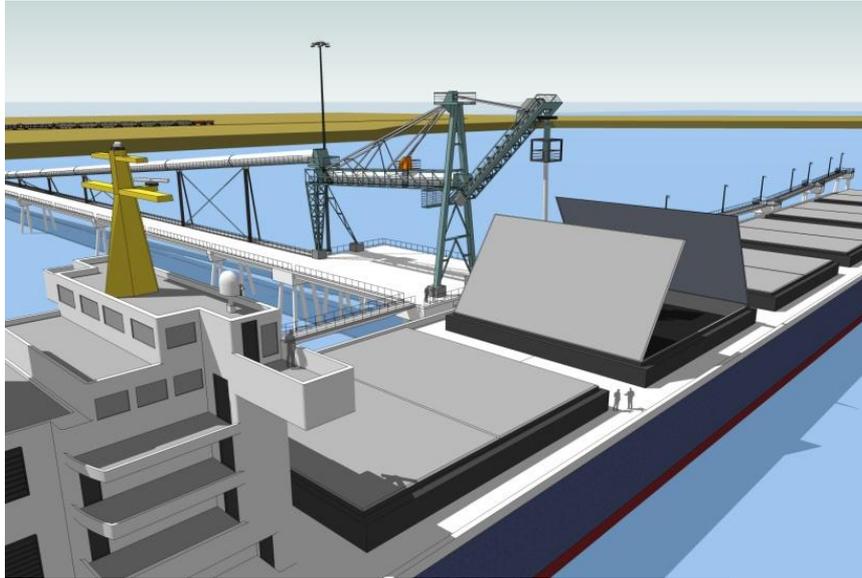
North Tongue Point Terminal Characteristics

- Shuttle train service provided by BNSF / WPRR
 - 110 car (shuttle track) linear track
 - 10,000 tons per train
 - Offload in 18 hours
- Storage for 50,000 metric tons
- 1,500 metric tons per hour ship loader
 - 30 hours to load 45,000 metric tons
- Conveyor length 600 meters
- Barge unloading facility

Future Tongue Point Terminal



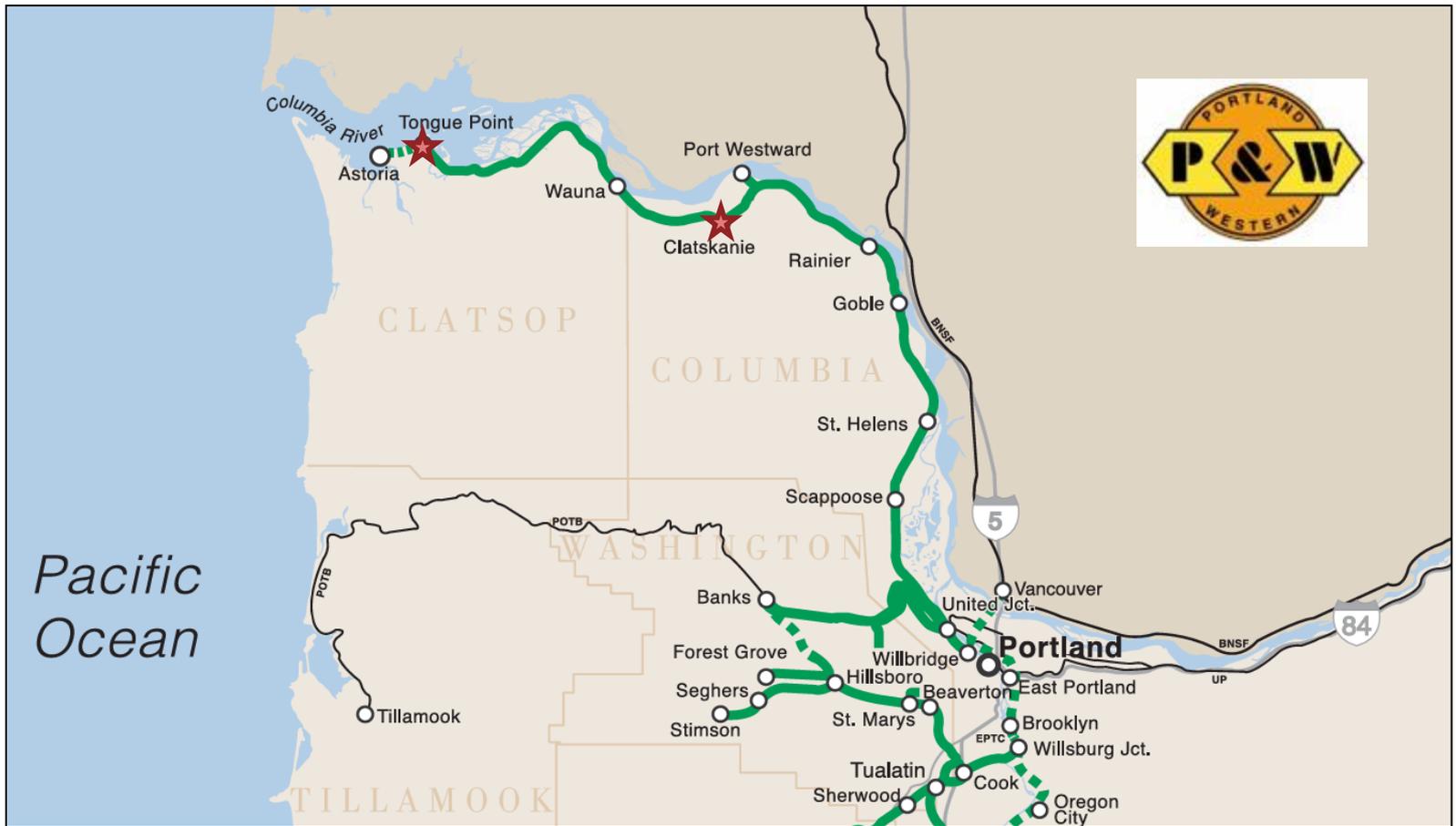
Future Tongue Point Terminal



Phase I – Port of Astoria Investment at North Tongue Point

- Port of Astoria invests up to \$20 million
 - Purchase property
 - Dredge to 43 feet
- Upgrade 37 miles of railroad to Class 2 or Class 3 standard (25-40 mph)
 - (Railroad, state, and federal funding)

Map of Astoria Rail Line



North Tongue Point

Potential Volumes and Future Phases

- Phase 1
 - 2015 – 0.5 million metric tons, 10 ships
 - 2020 – 2 million metric tons, 40 ships (at capacity)
- Phase 2
 - 2025 – 4 million metric tons, 80 ships (with additional investment)
- Phase 3
 - 2030 – 6 million metric tons, 120 ships (with additional investment)

Phase I – Korean Investment at North Tongue Point

- Koreans invest up to \$100 million
 - Docking facility
 - Elevator and conveyor system for 2 million metric tons of grain per year

Future Pier 3 Operation



PIERS 1, 2 & 3



Pier 3 Projects

- Designed for 3,000-5,000 TEU vessels
- Docking Facility and Container crane
 - State and federal grants - \$5 million
 - Port loan from shipper revenues - \$5 million
 - Korean crane investment - \$5 million
 - Total investment of \$15 million

Financial Considerations

Summary of Public/Private Partnership

- Total investment in all projects - \$135 million
 - Public investment- \$30 million (22%)
 - Port / State / Federal support
 - Funding
 - Permitting
 - Lobbying
 - Commodity Sourcing
 - Korean investors - \$105 million (78%)
 - Long-term lease – 30 years, option to extend

Other Incentives

Immigration

- EB-5 program
 - Minimum investment is \$500,000 (high unemployment or rural area)
 - Create or preserve at least 10 full-time jobs for qualifying U.S. workers within two years
 - Investor gets permanent residency

Other Advantages

- A terminal owned by Korean investors gives them:
 - Control over more of the transportation chain
 - The ability to allocate costs differently
 - Less vulnerability to market fluctuations
- Free trade agreement between Korea and United States
 - Port of Astoria to reactivate Free Trade Zone
- Port could acquire rail line between Astoria and Port Westward
 - Ability to control switching costs
- Property tax abatement for 3-5 years

Next Steps

Next steps

- Korean commitment to funding
- Public/private partnership agreement
- Engineering/design
- Permitting
- Public funding
 - Rail
 - Dredging
 - Utilities
 - Roads

Opportunity

기회

- Location



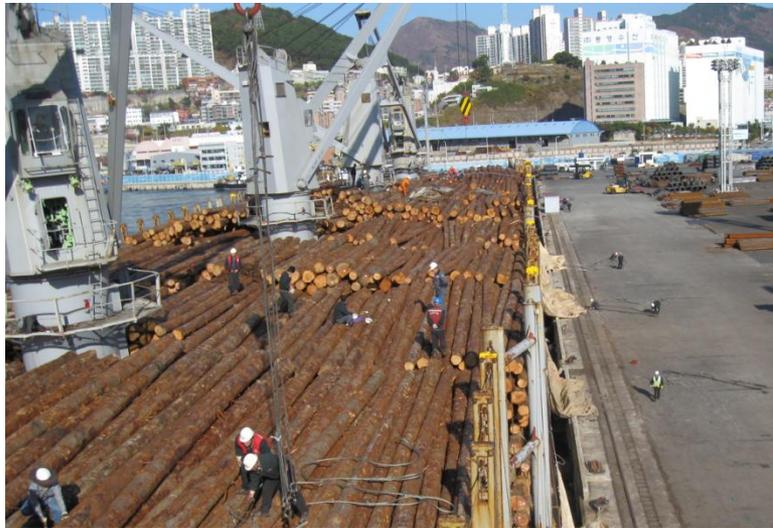
- Available Resources



- Shipper Control

We are open for business

우리는 비즈니스에 활짝 열려 있습니다.



Thank you 감사합니다