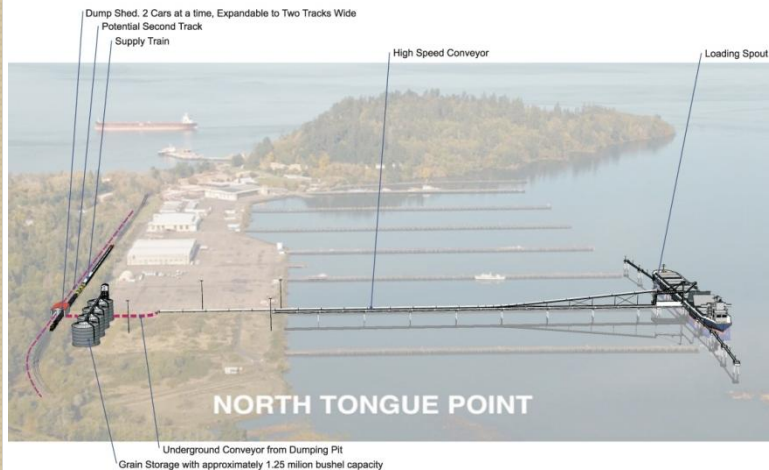


# Port Investment Opportunities in Astoria, Oregon USA

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

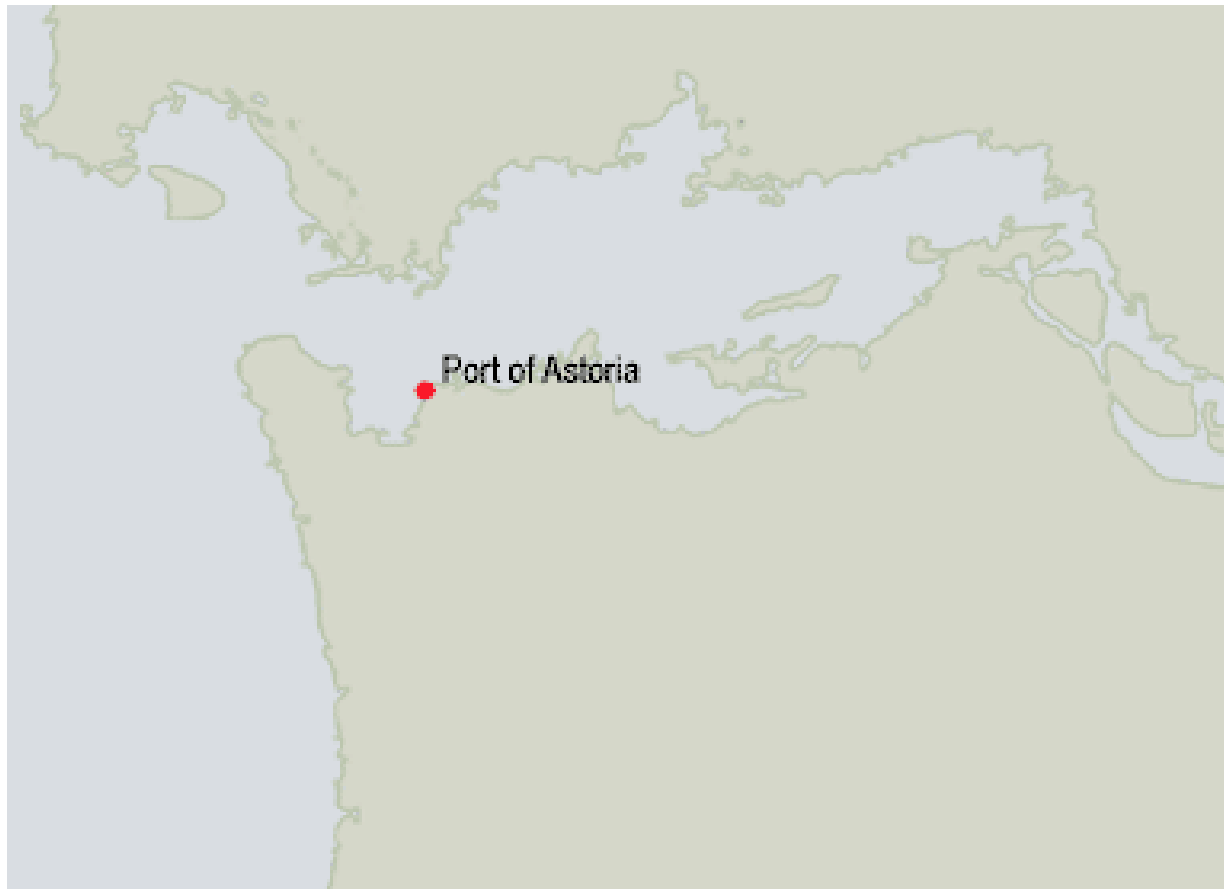


# Introduction to the Port of Astoria





# Located at the mouth of the Columbia River at Rivermile 13



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



# Pier I

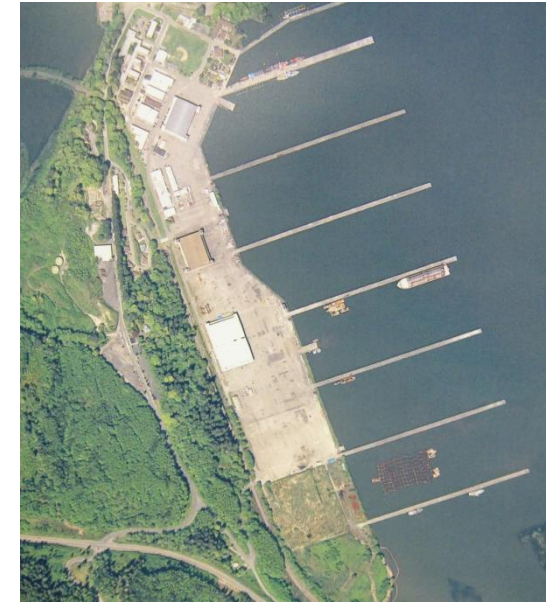


- For cruise ships, general cargo, military and industrial vessels
- Modern concrete dock accommodates vessels up to 1,100 ft.
- 40 ft depth, 16 ft pier height
- Yokohama Fender System
- Modern pier facilities (800 ppsf load capacity)
- 5 acres of additional upland staging area
- Fully paved, lighted, 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
<b><u>Log/lumber Ships by Fiscal Year</u></b>		
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

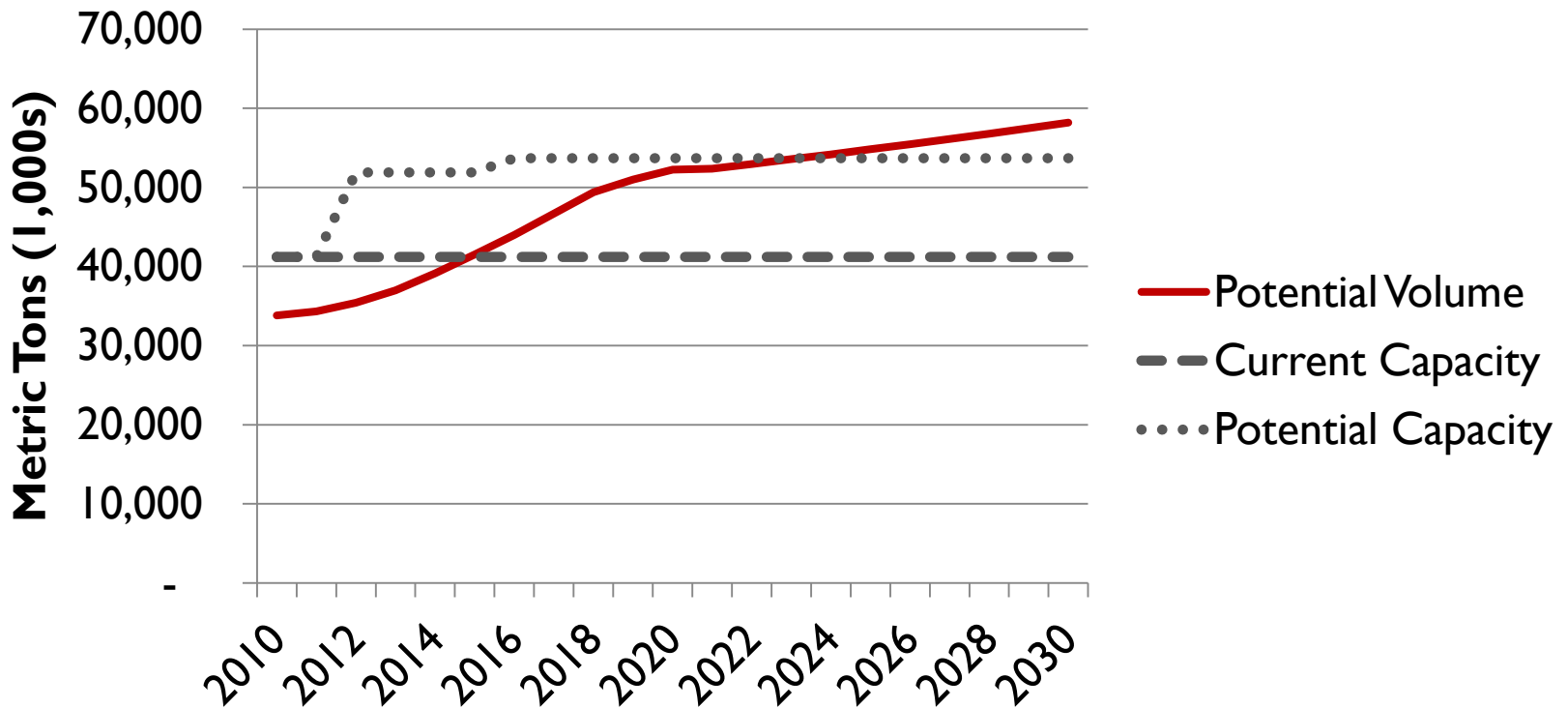
# PNW Export Elevator Capacity

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)

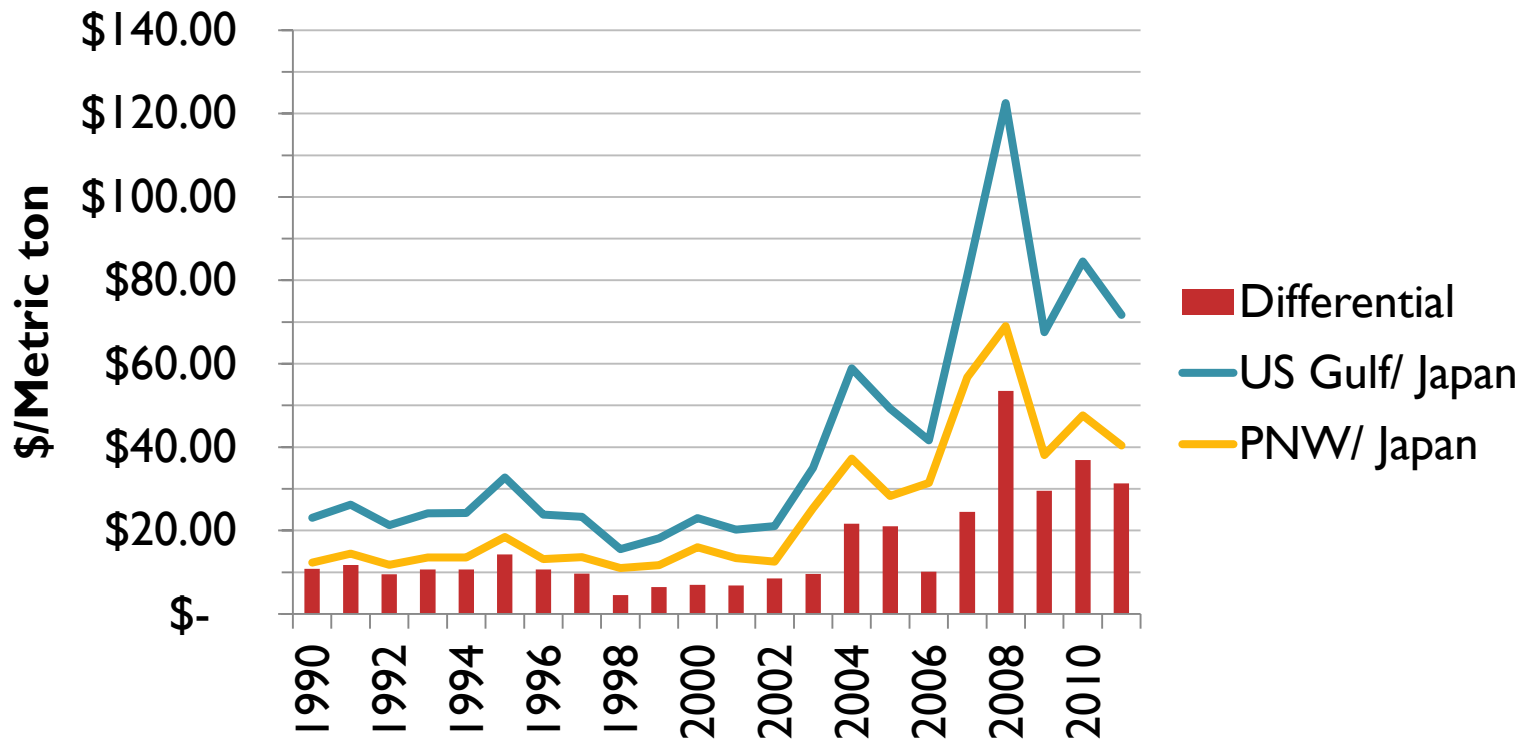


# Advantages to Astoria

# Advantages to Astoria

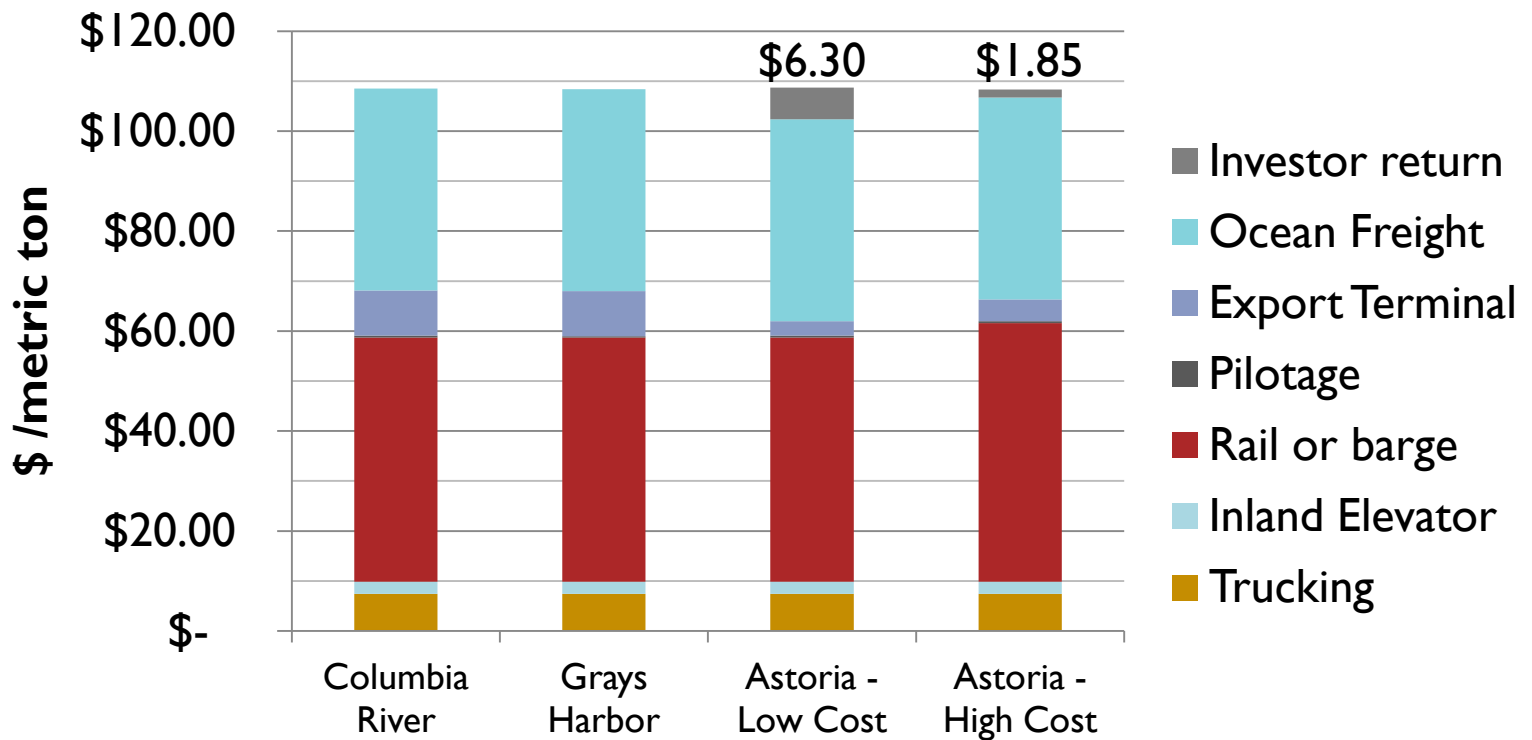
- Discounted tariff rates
- Land cost half that of upriver ports
- Less congestion
- No wait for anchorage (currently 2-4 days upriver)
- Less vulnerable to reduced funding for channel maintenance dredging
- Ships calling at upriver ports are limited by 43-foot channel – may be able to top off at Astoria
- 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

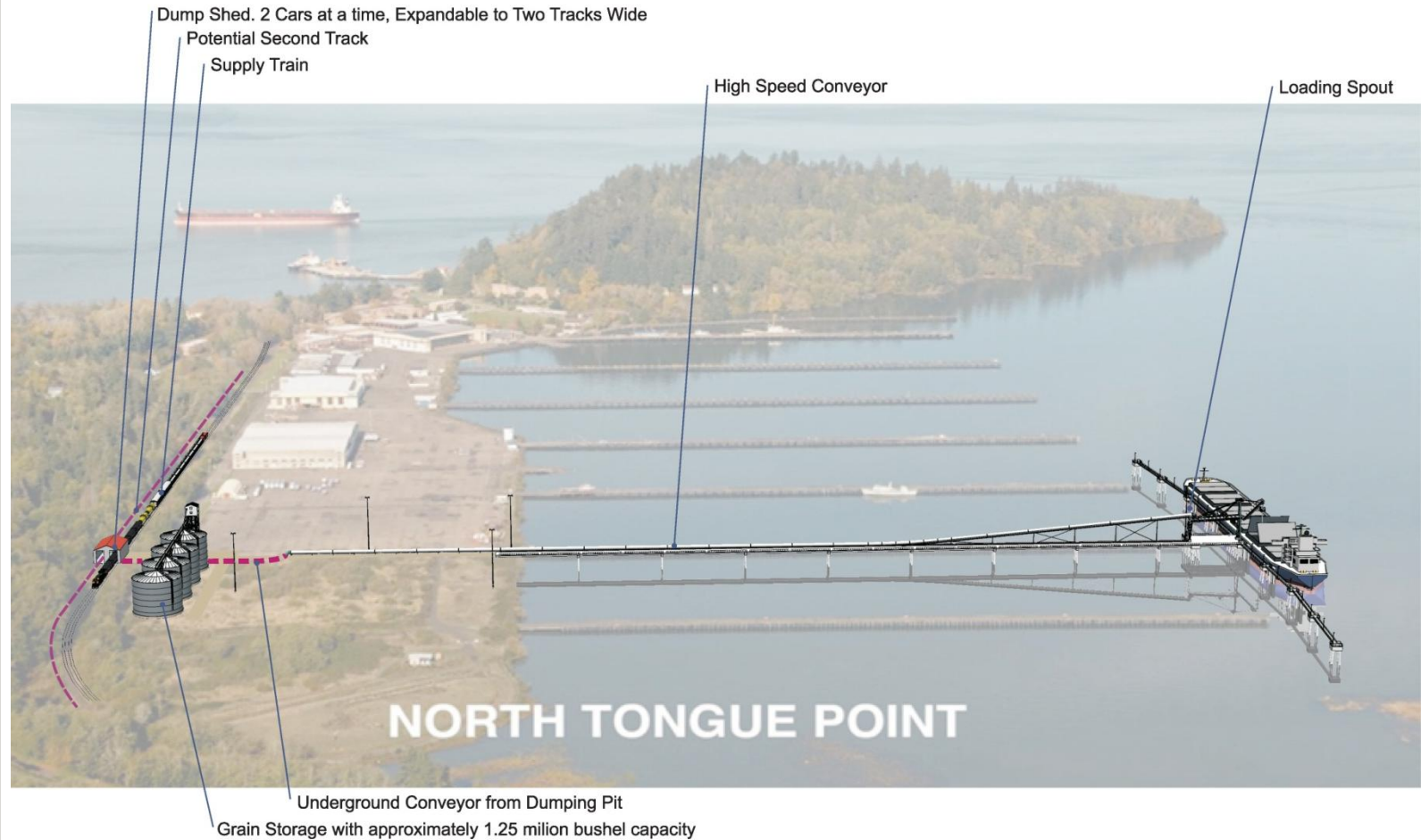
# Capital Requirement

# North Tongue Point Terminal Characteristics

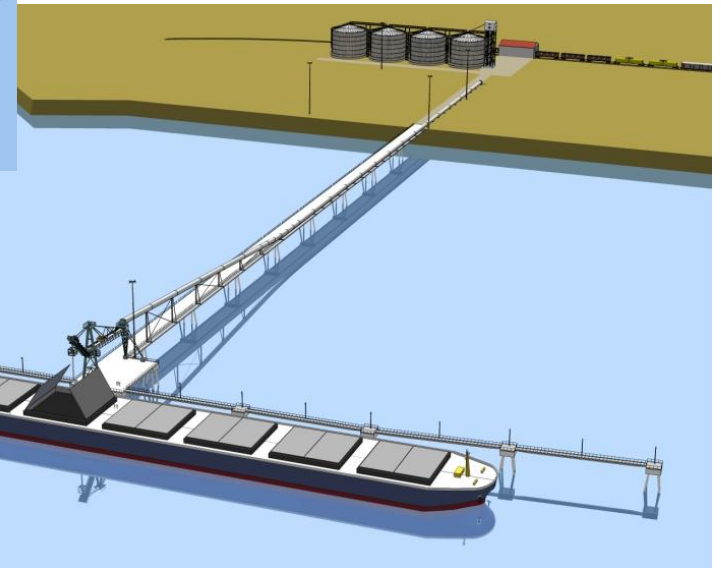
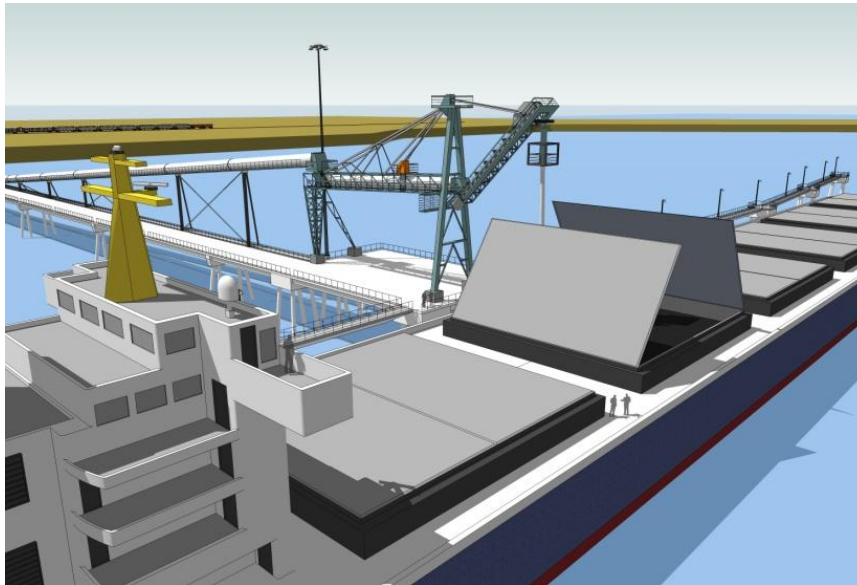
- Shuttle train service provided by BNSF / WPRR
  - 110 car (shuttle track) linear track
  - 10,000 tons per train
  - Offload in 18 hours
- Storage for 50,000 metric tons
- 1,500 metric tons per hour ship loader
  - 30 hours to load 45,000 metric tons
- Conveyor length 600 meters
- Barge unloading facility



# 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





# 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



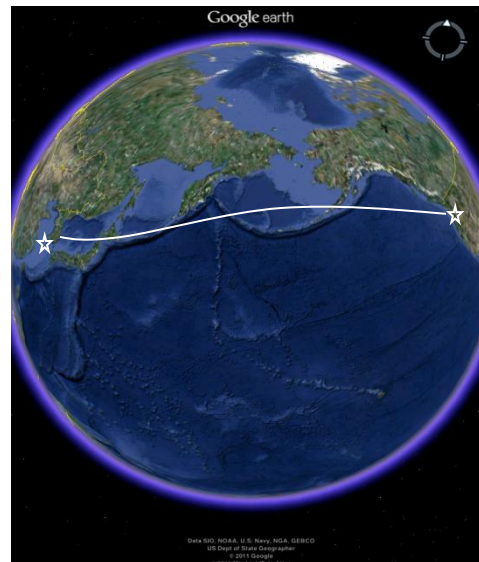
# Next steps

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

# Opportunity

기회

- Location



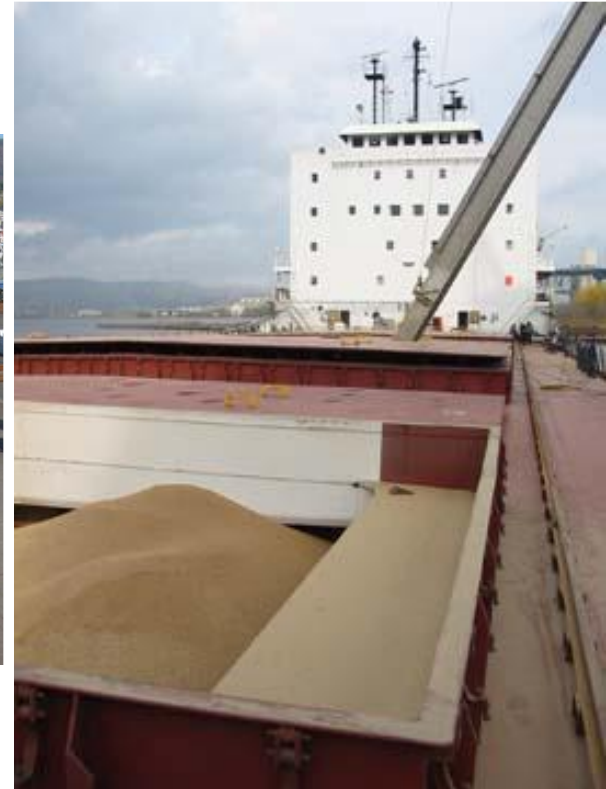
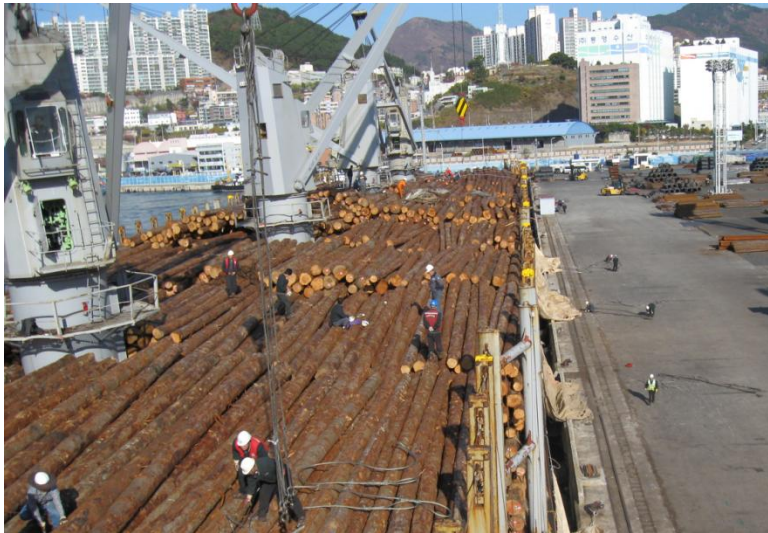
- Available Resources



- Shipper Control

# We are open for business

우리는 비즈니스에 활짝 열려 있습니다.



Thank you    감사합니다