Mission: To enhance the region's economy and quality of life by providing efficient cargo and air passenger access to national and global markets.

Possibility. In ever

llity. In every direct RTL

June 22, 2015

Portland, Oregon 97201 1900 SW Fourth Avenue, Suite 7100 Portland Planning and Sustainability Commission Andre Baugh, Chair

Dear Chairman Baugh and Commission Members:

the Comprehensive Plan and supporting documents. response to our input on several of the points raised but remain concerned about several areas of City of Portland can play in facilitating positive outcomes in those areas. We appreciate the on the importance of trade, jobs and transportation investment and the significant role that the Portland's Comprehensive Plan. Consistent with the Port's mission, our comments have focused Bureau of Planning since the Portland Plan established the broad foundation for the City of documents. As you are aware the Port of Portland has been engaged in this process with the Thank you for the opportunity to provide a final set of comments on the Comprehensive Plan

- Ľ the Portland Plan. We have proposed five alternative performance measures for the measures proposed do not actually evaluate the economic measures of success defined in Commission to consider (see attached letter "Draft Growth Scenarios Report"). The Draft Growth Scenarios Report defines performance measures. The performance
- 2 you to adopt the mid or high growth forecast. Channel Deepening on the Columbia River (ECONorthwest June 2015). We strongly urge harbor and is inconsistent with planned developments (see attached report Impacts of over 1 million tons of growth in twenty-five years which translates to no growth in the superfund clean-up. Specifically the low growth forecast is for 28.246 million tons by with current market activity and is likely to create a self-fulfilling prophecy that will The Economic Opportunities Analysis (EOA) March 2015 proposed draft recommends the 2040. Today, that same geography moves 27 million tons. The forecast proposes just impede the ability of the City to attract new investment to the harbor and support the forecast scenario for harbor lands is inconsistent with past growth trends , is not aligned low forecast scenario for the harbor lands. As noted in our April 17th letter, the low

Andre Baugh, Chair June 23, 2015 Page 2

ω Our suggested changes to the Draft Recommended Comprehensive Plan June 2015 are in attachment 1. One of particular concern is highlighted below:

space. West Hayden Island for deep water marine terminal industrial uses and open designation. We recommend policy language supporting future annexation of a policy is inconsistent with City Council action (July 2010) and Metro's understanding of the opportunities and requirements for annexation. The lack of undertaken on WHI should be incorporated into the City Comprehensive Plan. Hayden Island represents a fantastic opportunity for economic growth and This action would capture the community's and the Commission's level of natural resource protection over the next 20 years. The seven years of work Port is without options for future large scale marine terminal development. West The removal of policy 6.41, (annexation of WHI). For all practical purposes, the

we can provide any additional information to clarify these points. We look forward to working with staff as the City's Comprehensive Plan moves to final review and adoption. We appreciate the opportunity to raise our concerns with you again today. Please let me know if

Sincerely,

Susie Lah Senior Manager

Susie Lahsen®, Senior Manager Transportation and Land Use Policy

Attachments

Mission: To enhance the region's economy and quality of life by providing efficient cargo and air passenger access to national and global markets.

PORT OF PORTLA

June 23, 2015

Portland, Oregon 97201 1900 SW Fourth Avenue, Suite 7100 Andre Baugh, Chair Planning and Sustainability Commission

Chair Baugh and Commissioners,

understand and appreciate the GSR has been evolving since initially published in 2013. We also 12 Measures of Success. understand that the root of the GSR is found in the 2012 Portland Plan, specifically the Portland Plan's Thank you for the opportunity to comment on the Draft Growth Scenarios Report (GSR). We

- Ľ Equity and inclusion
- N Resident satisfaction
- ω Educated youth
- S 4 Prosperous households
- Growing business
- Job growth

- Transit and active transportation
- 00 Reduced carbon emissions
- 9 Complete neighborhoods
- 10. Healthier people
- 11. Healthy watersheds Safer city

somewhat to the economic growth and vitality of the City: of the City. However, of the Performance Measures selected in the GSR, only one (highlighted) relates Of these 12 core measures, numbers 4-6 (highlighted) directly relate to the economic growth and vitality

Access to family-wage jobs

Housing choice

N

Gentrification risk areas

ω

- 4 Complete neighborhoods
- σ S Frequent transit access
- 7 Low-stress bike network access
- Transportation: Vehicle miles traveled and mode share
- ∞ Greenhouse gas emissions
- 9 Parks access
- 10. Watershed health
- 11. Tree canopy
- 12. Natural area access

Measures of Success and connects to the performance of the Comprehensive Plan. retained and grown. Our comments are also provided on the basis of how the GSR implements the Columbia could be improved, this measure is not meaningful if industrial jobs are not also being transit access and less about the jobs themselves. While transit access from East Portland to the In addition, while "Access to family-wage jobs" is important, the measure is more about improved

7200 NE Airport Way Portland OR 97218

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Andre Baugh, Chair June 23, 2015 Page 2

that question will likely be impossible to answer. intended to provide information about the potential implications of growth that will help answer key questions that the document purports to answer. Under the Purpose heading on page 8, questions like: Where will new businesses be located?" With the current list of Performance Measures The Performance Measures selected in the GSR are also not consistent with at least one of the key "This report is

TAKE ACTION

reasons: feels economic-related metrics are not necessary in the GSR because they are already captured in the Add EOA Economic Measures: The Port's conversation with BPS staff has led us to believe that BPS Draft Economic Opportunity Analysis (EOA). However, this argument is not compelling for several

- Most, if not all, of the Performance Measures selected in the GSR are already reflected in other City documents. Examples include:
- 0 PP&R Urban Canopy Report 2012, measuring change in tree canopy over time;
- 0 BES Portland Watershed Management Plan Annual Report, measuring watershed health over time;
- 0 Climate Action Plan 2009 and Draft 2015, measuring greenhouse gas emissions change over time;
- 0 Transportation System Plan, measuring change in VMT and mode share over time

in the GR. impediment to including similar measures in the GSR. The EOA economic measures should be included Based on these examples in the GSR, economic measures contained in the EOA should not be an

investment for the benefit of the City of Portland and other public agencies. measures beyond those contained in the EOA, such as the amount of tax generated by private land supply and jobs that can be located on such land. However, there may also be useful economic to comply with State Administrative Rule OAR 660-09-0015. As such, it is focused on the employment Add Income and Tax Receipt Measures: In addition, the EOA is created for a specific purpose, namely

it is also be a discussion of policy levers to intensify cargo throughput and/or jobs on employment land in are only focused on housing. The report suggests measures are not applicable to employment, because discrete geographies such as harbor access lands. The scenarios all discuss policy levers for how to densify housing in discrete geographies. There should Increase/Intensify Cargo Throughput: Alternate Growth Scenarios do not consider employment, and a fixed geography. However, the same could be said about centers, corridors and the Central City.

Andre Baugh, Chair June 23, 2015 Page 3

particular geography. There are none identified for the Industrial and River Area. And finally, in the Key multiple bulleted statements describing the positive attributes of new development within that Strengthen Pattern Area for Jobs/Economy: Of the five "Pattern Areas" (p.23-26), the Industrial and Findings (p. 78) there is nothing related to economic measures beyond east Portland access to jobs. Areas". In addition, each of the four "Pattern Areas" except for the Industrial and River Area include River Area only merits one sentence compared to multiple paragraphs for the other four "Pattern

objectives outlined in the Portland Plan and City Comprehensive Plan. Progress toward the provision of Scenarios Report. Such measures should include: reasons, the Port recommends that robust and meaningful economic measures be added to the Growth middle income job growth must be measured if the intent is to change the current trajectory. For these welfare benefits to the individual but they also provide the revenue to accomplish the many other In an income tax dependent state, jobs not only create the opportunity for meaningful health and

- Foreign direct investment
- Export growth
- New business creation
- Portland Harbor cargo volumes
- Job distribution and growth by wage and location

all Measures of Success and additional Performance Measures. Again, the Port appreciates the work of the Commission to address growth scenarios and to incorporate

Sincerely,

Susie Lahsene, Sekidr Manager Transportation and Land Use Policy

ECONOMICS · FINANCE · FUNNING		ASSOCIATION
	\$870 million	Recent and Proposed Investments
Propane export terminal	\$500 million	Pembina (2018) (Proposed)
	\$370 million	Capital Investments to Date
Increase efficiency of shiploading New barge, new tug and new engines	\$140 million \$21 million	Canpotex – Portland Bulk Terminal (2013) Shaver Transportation (2014)
Largest dry dock in the US Improve road and rail access and capacity	\$50 million \$82 million	Vigor Industrial (2014) Rivergate Road and Rail Improvements (2012)
Improvements to rail and storage tanks Expanded grain storage and moving facilities	\$2 million \$21 million	International Raw Materials (2014) LD Commodities (2014)
Upgraded grain storage and handling New ship loading facilities	\$44 million \$10 million	Columbia Grain (2015) Kinder Morgan Bulk Terminal (2013)
Description	Investment Amount	Project (On-Line Date)
the Columbia River Channel	e 2010 Deepening of	Investments on the Portland Harbor Since the 2010 Deepening of the Columbia River Channel
Estimated Increased Annual Tax Revenue from Investments at the Portland Harbor		Total Investment at the Portland Harbor Since 2010
\$4.5 Million		\$370 Million
ened a floodgate of investments at terminals Portland Harbor. Columbia Grain and LD Morgan increased the capacity of their ex invested in their fertilizer operations. re powerful tugs. Shaver Transport Diversified Marine. Shaver also invested or Industrial is now home to the largest d private partners, is investing in road and owing demand for transportation services a River shipping channel many of these ppened in the Portland Harbor.	channel in 2010 ope evident than in the F ain terminals. Kinder faterials and Canpota o requires larger, moi Portland Harbor at D Portland Harbor at D ver in ten years. Vigo with other public and will help meet the gro ming of the Columbia pr would not have hap	The deepening of the Columbia River shipping channel in 2010 opened a floodgate of investments at terminals and ports along the river. Nowhere is this more evident than in the Portland Harbor. Columbia Grain and LD Commodities upgraded and expanded their grain terminals. Kinder Morgan increased the capacity of their bulk-commodities terminal. International Raw Materials and Canpotex invested in their fertilizer operations. Servicing the larger ships that carry more cargo requires larger, more powerful tugs. Shaver Transport invested in a new tug that's being fabricated in Portland Harbor at Diversified Marine. Shaver also invested in the first new grain barge on the Columbia River in ten years. Vigor Industrial is now home to the largest drydock in the U.S. The Port of Portland, along with other public and private partners, is investing in road and rail improvements in the Rivergate area, which will help meet the growing demand for transportation services from the expanded terminals. But for the deepening of the Columbia River shipping channel many of these investments either would not have happened, or would not have happened in the Portland Harbor.
		the Portland Harbor
	pact of	Continued Economic Impact of
	the	Investment Growth and the

Impacts of Channel Deepening on the Columbia River



\$1 billion invested in facilities and transportation capabilities that are dependent on river commerce. Much of the investment made by The Columbia River Navigation Channel runs from the Astoria bar to the Portland Harbor, a distance of 105 miles. Every year millions of private industry has been as a result of the channel deepening. 43 feet. Private industry responded with a wave of new investments coming into the river system. Since 2010, there has been more than region and the rest of the world. In the fall of 2010, the Army Corps of Engineers completed deepening the navigation channel from 40 to tons of cargo worth billions of dollars flow in and out of the Northwest, making this shipping channel a critical connection between our

IMPORTANCE OF CHANNEL MAINTENANCE

made investments and built capacity assuming a level of commerce supported by a 43-foot shipping channel. A channel less than this Maintaining the shipping channel to 43 feet will help ensure the continued growth in cargo movement and related economic activity. Firms depth would strand investments, reduce economic activity, and impact jobs.

\$370 Million Total Investment in the Portland Harbor

\$1 Billion Total Investment on the

Columbia River Since 2010

\$5.15 Billion Additional Investments Planned for the Columbia River

Port	Project	Investment Amount	Description
Longview	Export Grain Terminal (2012)	\$230 million	New grain terminal
Kalama	Temco LLC (2015)	\$100 million	Increase capacity (grain)
	Port of Kalama (2014-15)	\$7 million	Rail upgrades at the Port
	Kalama Export Grain (2011)	\$36 million	Increase storage capacity
Vancouver	United Grain Corporation (2012)	\$80 million	Enlarge storage and handling capacity
	West Vancouver Freight Rail Access (2015)	\$228 million	Rail expansion, new loop track, and road improvement
	Tidewater Barge Lines (2015)	\$30 million	Three new tugboats
Portland	Columbia Grain (2015)	\$44 million	Upgraded grain storage and handling
	Kinder Morgan Bulk Terminal (2013)	\$10 million	New ship loading facilities
	International Raw Materials (2014)	\$2 million	Improvements to rail and storage tanks
	LD Commodities (2014)	\$21 million	Expanded grain storage and moving facilities
	Vigor Industrial (2014)	\$50 million	Largest drydock in the US
	Rivergate Road and Rail Improvements (2012)	\$82 million	Improve road and rail access and capacity
	Canpotex - Portland Bulk Terminal (2013)	\$140 million	Increase efficiency of shiploading
	Shaver Transportation (2014)	\$21 million	New barge, new tug and new engines
Sub Total		\$1.08 Billion	
Proposed investments			
Longview	Millennium Bulk Terminal (2018)	\$600 million	New coal terminal
	Millennium Bulk Terminal (2018)	\$25 million	Smelter removal and environmental cleanup for new bulk terminal
Kalama	NW Works (2017-18)	\$1 8 billion	New methanol plant
St. Helens Port Westward	Global - Columbia Pacific Bio-Refinery (2018)	\$80 million	Increased storage and rail improvements
	NW Works (2017-18)	\$1.8 billion	New methanol plant
	Ambre Energy (2018)	\$242 million	Coal transport
Vancouver	Vancouver Energy (2018)	\$100 million	Rail improvements and loading facilities
Portland	Pembina (2018)	\$500 million	Propane export terminal
Total Proposed		\$5.15 Billion	the same allowed and the second of the same of the







Impacts of Channel Deepening on the Columbia River

June 2015





Possibility. In every direction.

CONTACT INFORMATION

Ed MacMullan, Lisa Rau, Lizzie Gooding, and Tina Morgan prepared this report. ECONorthwest is solely responsible for its content.

ECONorthwest specializes in economics, planning, and finance. Established in 1974, ECONorthwest has over three decades of experience helping clients make sound decisions based on rigorous economic, planning and financial analysis.

For more information about ECONorthwest, visit our website at www.econw.com.

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Portland, OR 97201

503-998-6530

Macmullan@econw.com

ACKNOWLEDGMENTS

We gratefully acknowledge the assistance of staff from ports and terminal operators who provided information on investments. The Ports of Longview, Kalama, St. Helens, Portland, and Vancouver **Export Grain Terminal** Temco LLC Kalama Export Grain Global - Columbia Pacific Bio-Refinery United Grain Corporation West Vancouver Freight Rail Access Vancouver Energy **Tidewater Barge Lines** Columbia Grain Kinder Morgan Bulk Terminal International Raw Material LD Commodities Vigor Industrial **Rivergate Road and Rail Improvements** Canpotex - Portland Bulk Terminal Shaver Transportation Company Millennium Bulk Terminal NW Innovations Works Pembina

SUMMARY

Three developments in the shipping industry are driving the push to deepen shipping channels around the world. The first is the increasing size and capacity of trade vessels.1 The size of vessels continues growing as shippers strive for increasing efficiency gains that reduce costs. The second is the widening and deepening of the Panama Canal. When completed in 2016, the canal will accommodate ships with draft of up to 50 feet, and that can carry up to twice the cargo capacity of the ships that currently pass through the canal.² The third is the increasing competition among ports and terminals to attract and accommodate the larger trade vessels.³ The U.S. Army Corps of Engineers oversees the federal channel-deepening work in the U.S. The Columbia River channel deepening was coordinated by the Corps, with a mix of funding from the Federal government and the States of Oregon and Washington.

Completion of the deepening of the Columbia River shipping channel in 2010 opened a floodgate of investments at terminals and ports along the river. According to a port representative, the deepening and the investments that followed provides shipping and commodity firms with certainty—certainty that ports, terminals and vessels can manage the mix of commodities and tonnage that today's global economy requires. Firms have confidence that shipments won't face backlogs at ports due to capacity constraints. Shipments move efficiently. Firms also spend less time monitoring, planning, and developing contingency shipping plans.⁴

Figure 1: Columbia River Ports



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

¹Ryan, Timothy P. The Economic Impact of Deepening the Mississippi River to 50 Feet. Big River Coalition, August 22, 2013. ³Panama Canal Authority. 2006. Proposal for the Expansion of the Panama Canal. Third Set of Locks Project. April 24. ¹Ryan, 2013.

Interview with Katy Brooks, Port of Vancouver, March 5, 2015.

Table 1 lists the investments in our study. Private and public entities invested \$370 million in the Portland Harbor, and \$1 billion at terminals and ports along the Columbia River, since 2010. Additional investments planned along the river amount to \$5.15 billion. Investments completed to date include:

- The first new grain terminal built in the U.S. in 25 years
- Expansion of the largest export grain terminal on the West Coast of the U.S.
- The first new grain barge on the Columbia River since 2011
- The largest drydock in the U.S.

Maintaining the shipping channel to 43 feet will help ensure the continued growth in cargo movement and related economic activity that has occurred since the deepening. Firms made investments and built capacity assuming a level of commerce supported by a 43-foot shipping channel. A channel less than this depth would strand investments, reduce economic activity, and impact jobs.

Table 1. Current and Planned Port Investments Along the Columbia River since 2010

Port	Project	Investment Amount	Description
Longview	Export Grain Terminal (2012)	\$230 million	New grain terminal
Kalama	Temco LLC (2015)	\$100 million	Increase capacity (grain)
	Port of Kalama (2014-15)	\$7 million	Rail upgrades at the Port
	Kalama Export Grain (2011)	\$36 million	Increase storage capacity
Vancouver	United Grain Corporation (2012)	\$80 million	Enlarge storage and handling capacity
	West Versey Freicht Beit Assess (2015)	C000	Rail expansion, new loop track, and
	West Vancouver Freight Rail Access (2015)	\$228 million	road improvement
	Tidewater Barge Lines (2015)	\$30 million	Three new tugboats
Portland	Columbia Grain (2015)	\$44 million	Upgraded grain storage and handling
	Kinder Morgan Bulk Terminal (2013)	\$10 million	New ship loading facilities
	International Raw Materials (2014)	\$2 million	Improvements to rail and storage tanks
			Expanded grain storage and moving
	LD Commodities (2014)	\$21 million	facilities
	Vigor Industrial (2014)	\$50 million	Largest drydock in the US
			Improve road and rail access and
	Rivergate Road and Rail Improvements (2012)	\$82 million	capacity
	Canpotex – Portland Bulk Terminal (2013)	\$140 million	Increase efficiency of shiploading
	Shaver Transportation (2014)	\$21 million	New barge, new tug and new engines
Sub Total		\$1.08 Billion	
Proposed Investments			
Longview	Millennium Bulk Terminal (2018)	\$600 million	New coal terminal
			Smelter removal and environmental
	Millennium Bulk Terminal (2018)	\$25 million	cleanup for new bulk terminal
Kalama	NW Works (2017-18)	\$1.8 billion	New methanol plant
St. Helens Port Westward		400 IIII	Increased storage and rail
or melens Fort westward	Global - Columbia Pacific Bio-Refinery (2018)	\$80 million	improvements
	NW Works (2017-18)	\$1.8 billion	New methanol plant
	Ambre Energy (2018)	\$242 million	Coal transport
Vancouver	Vancouver Energy (2018)	\$100 million	Rail improvements and loading facilitie
Portland	Pembina (2018)	\$500 million	Propane export terminal
Total Proposed		\$5.15 Billion	

INVESTMENT DETAILS

The Columbia River federal navigation channel runs from the Astoria bar to the Portland Harbor, a distance of 105 miles. Every year millions of tons of cargo worth billions of dollars flow into and out of the region, making this shipping channel a critical connection between the region and the rest of the world. In the fall of 2010, the U.S. Army Corps of Engineers completed deepening the shipping channel from 40 to 43 feet. Since 2010, private and public entities invested more than \$1 billion in facilities and transportation capabilities. Much of this investment can be linked to the channel deepening.

ECONorthwest reviewed news reports, press releases, and other public information on the investments made at terminals and ports along the Columbia River since the 2010 channel deepening. We also interviewed representatives of terminal operators and ports about these investments. Table 1 (on page 2) lists the major investments by port and terminal and those proposed for the near future.

Here we summarize information on each investment and proposed investment, by port. We begin with investments at the Port of Longview, and then move upstream to the Ports of Kalama, St. Helens/Port Westward, Vancouver, and Portland.

THE CHANNEL DEEPENING MAKES THE PHONE RING AT PORTS AND TERMINALS.

Soon after it became clear that the deepening would happen, a "floodgate" of investment opened. The deepening gave private firms the confidence to invest in terminal and transportation infrastructure at ports along the Columbia River. But for the deepening, much of this investment would not have happened, or would not have happened at ports on the Columbia River.

The deepening of the Columbia River shipping channel, and the investments in port, terminal and transportation infrastructure that followed, provides shipping and commodity firms with the certainty that ports, terminals and vessels can manage the mix of commodities and tonnage that competing in today's global economy requires. Firms have confidence that shipments won't face backlogs at ports due to capacity constraints. Shipments move efficiently. Firms also spend less time monitoring, planning, and developing contingency shipping plans.

A representative from one of the Columbia River ports summed up the effect of the deepening as: "The channel deepening makes the phone ring."⁷

PORT OF LONGVIEW

Export Grain Terminal

The Export Grain Terminal (EGT) at the Port of Longview was the first new grain terminal in the U.S. in 25 years. This efficient, state-of-the-art terminal was the first of a series of investments in grain terminals along the Columbia River. Increasing demand from Pacific Rim countries combined with the greater efficiency of larger ships with deeper drafts facilitated by the deepening of the Columbia shipping channel, gave EGT and other terminal operators the confidence that their investments would pay off. EGT invested approximately \$230 million in their Longview terminal, which came online in 2012. Prior to the channel deepening, EGT primarily stored and moved wheat. Now, with expanded capacity and facilities, they store and move wheat, corn and soybeans. The increased grain shipments through the EGT terminal after the channel deepening also increased the demand for rail service to the terminal.⁵

Millennium Bulk Terminal

Millennium Bulk Terminal is proposing an investment of \$600 million toward renovating an existing terminal into a coal export terminal and another \$25 million to complete the environmental cleanup to make way for a new bulk terminal.⁶

Interview with Ashley Helenberg, Port of Longview, March 18, 2015; Port of Longview New Release, Port of Longview Inks Property Lease for Export Grain Terminal, June 1, 2009; Export Grain Terminal New Release, July 9, 2012, http://www.egtgrain. com/news/release/egt-facility-creates-new-export-opportunities-for-american-farmers/.

elnterview with Peter Bennett, Millennium Bulk Terminal, March 14, 2015; Information on Millennium Bulk Terminal's website, www.millenniumbulk.com.

PORT OF KALAMA Temco (CHS/Cargill)

The \$100 million expansion of the Temco LLC grain terminal tripled the terminal's capacity. The project included a new vessel dock and loading equipment, new rail and barge receiving machinery, and upgraded grain cleaners. The terminal can now process up to 200 million bushels of grain per year, comparable to the Temco terminal in Tacoma. As a result of the expansion, employment during grain-shipping season will double to 120.⁸

The Port of Kalama invested \$7 million in rail upgrades at the port to facilitate and support the increased rail traffic.⁹

Kalama Export Company

Kalama Export expanded their grain storage and handling capacity by 25 percent with a \$36 million dollar investment. In addition to expanded storage, they added a new grain cleaning system and loading belt.¹⁰

NW Innovation Works

NW Innovation Works is considering multiple sites in Oregon and Washington to locate two methanol plants. The Port of Kalama is one of those sites. Each plant would be built in two phases. A phase one \$1 billion investment, with \$800 million invested in phase two. Once operational, the plant would employ 120 full-time workers.¹¹

PORT OF ST. HELENS AND PORT WESTWARD

Global Partners- Columbia Pacific Bio-Refinery

Global Partners is investing approximately \$80 million in improved and expanded rail lines, increased oil storage and unloading capacity, and is working with the Port to expand their dock to support moorages of larger vessels.¹³

NW Innovation Works

NW Innovation Works is also considering the Port Westward location for a methanol plant. This plant would also happen over two phases with a total investment of \$1.8 billion and fulltime employment of 120.¹⁴

Ambre Energy

Ambre Energy is pursuing the Morrow Pacific Project where up to 8 million tons of coal would travel by rail to the Port of Morrow and by barge to the Port of St. Helens for export loading. This project has a total investment of \$242 million and would create over 1,000 jobs.

CHANNEL DEEPENING INCREASED THE COMPETITIVENESS OF COLUMBIA RIVER PORTS AND TERMINALS.

The investments spurred by the deepening increased the competitiveness of Columbia River ports. For example, ports on the Columbia River have a cost and time advantage over Gulf Coast ports for corn and soybean shipments to the Pacific Rim. Before the deepening, corn and soybeans produced in the Midwest moved by barge down the Mississippi River to Gulf Coast ports for shipment through the Panama Canal to Pacific Rim destinations.

Terminals at Columbia River ports were not equipped to move these grains, which require different conveyer and storage infrastructure than wheat, the dominant grain moved through Columbia River terminals at the time. Investments made at ports along the Columbia River in the wake of the deepening include upgraded grain elevators designed for corn and soybeans, along with expanded unit train capabilities. The result: a significant shift in grain activity from Gulf ports to Columbia River ports.¹²

Interview with Paul Butters, Temco LLC, March 2, 2015; Luck, M. 2014. "Temco grain terminal expansion nearly complete." TDN.com. November 24; Pittman, J. 2014. "Temco grain terminal expansion on track for fall completion, officials say." TDN. com. July 21; Comments from Pacific Northwest Waterways Association staff, May, 2015.

"The Columbian. "Port of Kalama to double Temco site's rail capacity." December 13, 2013.

¹²Interview with Tony Flagg, United Grain Corporation, March 16, 2015.

13 Interview with Pat Trapp, Port of St. Helens, March 9, 2014; Toledanes, L. 2013. "Port of St. Helens commissioners approve increase to train traffic." TDN.com. November 13.

¹⁵Interview with Steve Oakes, Kalama Export Company, March 19, 2015; Olson, E. 2010. "Kalama port officials say grain export expansion will create 180 jobs." TDN.com. February 17; Siemers, E. 2011. "Vancouver port lands \$72M deal." The Portland Business Journal, http://www.bizjournals.com/portland/print-edition/2011/01/14/vancouver-port-lands-72m-deal.html?s=print; ADM. 2014. News Release: Marubeni and ADM Bolster Export Joint Venture in U.S. Pacific Northwest. September 30. "Interview with Mark Wilson, Port of Kalama, March 9, 2014; Northwest Innovation Works, http://nwinnovationworks.com/; Castano, C. 2014. "China-funded methanol plants in Oregon." KOIN6. http://koin.com/2014/01/22/china-funded-methanol-plants-oregon/.

¹⁴Interview with Pat Trapp, Port of St, Helens, March 9, 2014; Northwest Innovation Works, http://nwinnovationworks.com/; Castano, C. 2014. "China-funded methanol plants in Oregon." KO/N6. http://koin.com/2014/01/22/china-funded-methanolplants-oregon/; Miller, M. 2014. "Port of St. Helens give OK to methanol plant lease option." Pamplin Media, http://www.pamplinmedia.com; The Clatskanie Chief, 2014. "Port commission signs lease option with methanol company." The Clatskanie Chief. February 20. http://www.thechiefarchive.com/author/clatskaniechief/page/147/; Godley, V. 2014. Letter to the Port of St. Helens Community. NW Innovation Works. October.

BECAUSE OF THE DEEPENING, COLUMBIA RIVER PORTS AND TERMINALS ARE WELL POSITIONED TO RESPOND TO GROWING DEMAND FROM THE PACIFIC RIM

Many terminal operators indicated that without the deepening they would not have invested in upgrading their facilities. With growing demand from China and other countries along the Pacific Rim, this would have been a significant lost opportunity for terminal operators and shippers. Now, terminals along the Columbia River are well positioned to take advantage of this growth.¹⁵



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VANCOUVER

United Grain Corporation

With their \$80 million investment to expand their grain terminal, United Grain Corporation now has the largest export grain terminal on the West Coast, and the second tallest grain structure in the world. The development started in 2008-2009, anticipating the channel deepening completion and larger ships with deeper drafts calling on Columbia River ports. Like other grain terminals along the Columbia River, United Grain Corporation's expansion included adding storage and transport capabilities for grains new to this market—corn and soybeans—along with their traditional wheat product.¹⁶

West Vancouver Freight Rail Access

The Port of Vancouver is investing \$228 million in rail and road improvements to meet the transportation demands of terminal operators such as United Grain Corporation. These investments include expanding rail tracks, adding a loop track, and improved road and rail access to the port and terminals.¹⁷

Vancouver Energy

Vancouver Energy is investing approximately \$100 million in a "crude-by-rail" terminal. The project is projected to start in 2016. The investment includes new rail lines and storage facilities to move crude oil through the terminal. This terminal will be one of those serviced by the new West Vancouver Freight Rail Access investments.¹⁸

¹⁷Interview with Katy Brooks, Port of Vancouver, March 5, 2015; Port of Vancouver USA Press Release, "Port begins final phase of West Vancouver Freight Access rail projects." November 12, 2014; Port of Vancouver USA. West Vancouver Freight Access, http://www.portvanusa.com/wvfa/wvfa-home/; Guerra, K. 2011. "Port of Vancouver launches key component of multimilion-dollar rail expansion project." The Oregonian. December 7.

"Interview with Katy Brooks, Port of Vancouver, March 5, 2015; Port of Vancouver USA. Board of Commissioners Workshop Tesoro-Savage Joint Venture Lease Overview. July 22, 2013; Savage. Tesoro and Savage announce joint venture to construct and operate crude-by-rail unloading and marine loading facility at Port of Vancouver USA. http://www.savageservices.com/pressroom/; Energy Facility Site Evaluation Council, http://www.efsec.wa.gov/Tesoro-Savage.shtml.

¹⁴Interview with Pat Trapp, Port of St. Helens, March 9, 2014; Northwest Innovation Works, http://nwinnovationworks.com/; Castano, C. 2014. "China-funded methanol plants in Oregon." KOIN6. http://koin.com/2014/01/22/china-funded-methanolplants-oregon/; Miller, M. 2014. "Port of St. Helens give OK to methanol plant lease option." Pamplin Media, http://www.pamplinmedia.com; The Clatskanie Chief, 2014. "Port commission signs lease option with methanol company." The Clatskanie Chief. February 20, http://www.thechiefarchive.com/author/clatskaniechief/page/147/; Godley, V. 2014. Letter to the Port of St. Helens Community. NW Innovation Works. October. *interview with Katy Brooks, Port of Vancouver, March 5, 2015.

¹⁶Interview with Tony Flagg, United Grain Corporation, March 16, 2015; United Grain Corporation, http://www.ugcpnw.com/; Siemers, E. 2011. "Vancouver port lands \$72M deal." The Portland Business Journal. January 14. http://www.bizjournals. com/portland/print-edition/2011/01/14/vancouver-port-lands-72m-deal.html?s=print; Interview with Katy Brooks, Port of Vancouver, March 5, 2015; Mitsui & Co. "Harvesting opportunities in agriculture." https://www.mitsui.com/jp/en/business/ challenge/1201987_1856.html;

DEEPENING-RELATED INVESTMENTS STRETCH BACK TO THE MIDWEST

Most of the investments spurred by the deepening happened or are happening at terminals along the Columbia River. Some investments, however, occured many miles away. For example, some shippers made investments in rail infrastructure that supports their upgraded and expanded elevators at terminals on the river. These investments include unit-train cars, rail loops, and loading facilities in Montana and North Dakota.²⁰

Tidewater Barge Lines

With the channel deepening came larger ships, with deeper drafts, carrying increased amounts of cargo. Much of this cargo moves up and downriver via tugs and barges. In response to this demand, Tidewater Barge Lines is investing an estimated \$30 million in three new and environmentally friendly tugs, with reduced air emissions and improved fuel efficiency. Vigor Industrial in Portland is fabricating the tugs, which will be delivered by the end of 2015. Fabricating the tugs in the Portland area helps keep more investment dollars in the local economy.¹⁹

PORTLAND

Columbia Grain

Columbia Grain is expanding their grain storage and handling capacity with a \$44 million investment. In addition to more storage capacity, the expansion will allow Columbia Grain to store and move corn and soybeans in addition to wheat, which had been their primary grain product.²¹

Kinder Morgan Bulk Terminal

Kinder Morgan invested \$10 million in a new ship loader. This is the largest investment Kinder Morgan has made in any of their terminals on the Columbia River (Ports of Longivew, Vancouver, and Portland).²²

International Raw Materials

International Raw Materials switched their loading operations from loading shallow-water barges to a deep water berth that can service larger ships that use the added depth of the shipping channel. They invested \$1.5 million in the switch. International Raw Materials now has one of the deepest berths on the West Coast of the U.S. Ships carrying liquid fertilizer frequently dock at their facility to offload fertilizer and then head south to terminals with shallower berths that could not accommodate fully-loaded vessels.²³

LD Commodities

Louis Dreyfus Commodities invested \$21 million to remodel and update its grain terminal on the Willamette River. Prior to this investment, their terminal frequently hit capacity due to the increasing volumes of grains traveling down the Columbia River.²⁴

Vigor Industrial

The largest floating drydock in the U.S., the *Vigorous*, arrived at Vigor Industrial's Portland shipyard in August of 2014. Vigor invested \$40 million building the drydock and \$10 million delivering and assembling it. Demand for the new drydock will come from servicing cruise ships, post-Panamax vessels and U.S. Military Sealift Command ships. At the time the *Vigorous* arrived at Vigor Industrial, two large cargo ships operated by the Maritime Administration were waiting for service using the new drydock.²⁵

Rivergate Road and Rail Improvements

The Port of Portland, along with other public and private partners, is investing approximately \$82 million in road and rail improvements in the Rivergate area. These investments include widening roadways and adding rail overpasses, expanding rail yards, deepening berths, and investing in new cranes and wharfs. These investments are necessary to meet the growing demand for

¹⁷Interview with Jennifer Riddle, Tidewater Barge Lines. March 31, 2015; estimates by ECONorthwest.

²⁰Interview with Tony Flagg, United Grain Corporation, March 16, 2015.

²²Interview with Neil Maunu, Kinder Morgan Bulk Terminal. March 10, 2015.

²⁴Culverwell, W. 2012. "Louis Dreyfus plans \$21 M update to Rose Quarter grain elevator. The Portland Business Journal. December 27.

²Interview with Phil Healy, Port of Portland. February 17, 2015; Linstrom, A. 2012. "South Rivergate Rail Yard Expansion boosts flow of export." PortDispatch. Port of Portland. August, 7. http://www.portofportland.com/publications/PortDispatch/ post/South-Rivergate-Rail-Yard-Expansion-Boosts-Flow-of-Exports.asp

²¹Interview with Amer Badawi, Columbia Grain, March 9, 2015; Interview with Patrick Bryan, Pacificor LLC, February 25, 2015; ADM. "Marubeni and ADM bolster export joint venture in the U.S. pacific Northwest." Longshore Shipping News. October 1, 2014. http://www.longshoreshippingnews.com/2014/10/adm-marubeni-announce-changes-in-northwest-grain/.

²³Interview with Tim Mahoney, International Raw Materials. March 11, 2015; International Raw Materials LTD. http://www.irmteam.com/our-company/;

²¹Interview with Alan Sprott, Vigor Industrial, March 19, 2015. Vigor Industrial. "The Vigorous: investing in the future," "Country's larges floating drydock coming to Portland." Vigorindustrial.com/vigorous; Graves, M. 2014. "North America's largest drydock floats first ship at Swan Island's Vigor Industrial." The Oregonian. Nivember 23. http://blog.oregonlive.com/business_impact/print.html?entry=/2014/11/north_americas_largest_drydock_1.html.

transportation services from expanded terminals that service larger ships with deeper berths that use the added depth in the shipping channel.²⁶

Canpotex – Portland Bulk Terminal

Canpotex is investing \$140 million in new facilities and equipment to increase the efficiency of their potash shiploading facility. The investment includes a new shiploader, improved operations and management capabilities, and an upgraded conveyance system. The increased efficiency will shorten turnaround times for Canpotex trains and ships at their Portland terminal.²⁷

Shaver Transportation Company

Shaver Transportation Company has been on a steady program of upgrade and construction since the channel deepening. The company responded to the increased demands from larger vessels with a repowering and new construction program kicked off in 2011. Shaver invested \$9.5 million in a new tug, the SUMMER S, which is being fabricated in Portland at Diversified Marine. They also invested \$4.9 million in new engines and repowering some of their existing tugs. They also invested \$7 million in two new grain barges, the first new grain barges on the Columbia River since 2011.²⁸

Pembina

Pembina proposes building a \$500 million propane export terminal. The City of Portland's Planning and Sustainability Commission recently voted to amend a zoning code to allow the terminal to be built. The



By Sarah McD from Portland, OR, USA (Tidewater Barge - Columbia River) [CC BY 2.0 (http://creativecommons.org/licenses/by/2.0)], via Wikimedia Commons

proposal now goes to the Portland City Council for a vote. If the Council approves the project, it may come online by 2018.²⁹

CONCLUSION

According to terminal operators, if not for the deepening of the Columbia River shipping channel to 43 feet, many of the investments listed in this report either would not have happened, or would not have happened at ports or terminals along the Columbia River. The deepening occurred at a time of increasing demand from Pacific Rim countries, especially China, for U.S. grain exports. Columbia River ports and terminals capitalized on this demand in large part because of the enhanced shipping capacity that the deepening offered. Operators upgraded and expanded grain terminals. Transportation investments facilitated moving increasing amounts of Midwest grain to ports on the Columbia River—grain that otherwise would have moved down the Mississippi River to Gulf Cost ports. In addition to grain terminal and transportation infrastructure investments, terminal operators expanded or proposed new facilities for energy and bulk commodities.

Maintaining the shipping channel to 43 feet will help ensure the continued growth in cargo movement and related economic activity seen since the deepening. Firms made investments and built capacity assuming a level of commerce supported by a 43-foot shipping channel. A channel less than this depth would strand investments, reduce economic activity, and impact jobs.

²⁷Port of Portland. 2014. Press Release. "Canpotex to Invest at Port of Portland Terminal." October 8. http://www.portofportland.com/NewsRelease; Canpotex. Logistics. http://www.canpotex.com/what-we-do/logistics; Siemers, E. 2013. "Canpotex planning new potash storage facility at Port of Portland." *The Portland Business Journal*. February 20. http://www.bizjournals.com/portland/news/2013/02/20/canpotex-planning-new-potash-storage.html?s=print; George-Cosh, D. 2014. "Canpotex expanding Portland, Ore., marine terminal." *The Wall Street Journal*. Ottober 8. http://www.wsj.com/articles/canpotex-expanding-portland-ore-marine-terminal-112796970. "Interview with Rob Rich, Shaver Transportation Company, March 31, 2015.

³⁹Interview with Teresa Carr, Port of Portland, April 3, 2015; Holmstrom, C. 2015. "Propane pipeline one step closer to Portland." KOIN6. April 7. http://koin.com/2015/04/07/pembina-propane-plan-draws-port-protesters/.

Attachment 1

City	Policy Issue/Recommended by City staff (June 2015 draft comp plan)	Additional Port Comments June 2015
1.11	Consistency with Metro Urban Growth Management Functional Plan and Urban Growth Boundary. Ensure that the Comprehensive Plan is remains consistent with the Metro Urban Growth Management Functional Plan and supports a tight urban growth boundary for the Portland metropolitan area.	Support Policy is consistent with retaining WHI Policy 6.41 from prior draft and as proposed in this letter.
6.14 Brownfield Redevelopment	Overcome financial-feasibility gaps to cleanup and redevelop 60 percent of brownfield acreage by 2035. Additional related policies are found in the Industrial and employment districts section of this chapter.	Add specific policies to support, encourage and incent brownfield redevelopment 6.14.a Review local land use policies and development code regulations to ensure they are supportive of cleanup and redevelopment for the highest and best use. 6.14.b Pursue grants, loans and or other technical assistance to make redevelopment financially viable to a private developer. 6.14.c Commit future city budget surplus to brownfield redevelopment
6.39 Prime industrial land retention	 Protect the multimodal freight-hub industrial districts at the Portland Harbor, Columbia Corridor, and Brooklyn Yard as prime industrial land (see Figure 6-1 – Industrial and Employment Districts) that is prioritized for long-term retention. 	Support
6.39.a. Prime industrial land retention	Strictly limit-Prohibit quasi-judicial Comprehensive Plan Map amendments that convert prime industrial land and consider the potential for amendments to otherwise diminish the economic competitiveness or viability of prime industrial land.	Support
6.39.c. Prime industrial land retention	Limit regulatory impacts on the capacity, affordability, and viability of industrial uses in the prime industrial area. Identify how regulations affect the capacity, affordability, and viability of industrial uses, and limit minimize those impacts.	Support

6.39.d. Prime industrial land retention	Strive to offset the reduction of development capacity as needed, with additional prime industrial capacity that includes consideration of comparable site characteristics. Offsets may include but are not limited to additional brownfield remediation, industrial use intensification, strategic investments, and other innovative tools and partnerships that increase industrial utilization of industrial land.	Support
6.39.e. Prime industrial land retention	Limit the use of prime industrial land for siting of parks, schools, large-format places of assembly, and large-format retail sales.	Change to read: STRICTLY limit the use of prime industrial land
6.39.f. Prime industrial land retention	Promote efficient use of freight hub infrastructure and prime industrial land by limiting non-industrial uses that do not need to be located in the prime industrial area.	Support
6.41 West Hayden Island	Entire section 6.41 stricken from comp plan i.e. not included	Retain first section of 6.41: Provide for the future annexation of WHI for a combination of open space and deep water marine industrial uses with supplemental requirements in a plan district or implementation agreement that ensures mitigation of impacts and provision of public benefits. Policy is retained based on City Council action and Metro designation.
6.43 Columbia East	Provide a mix of industrial and limited business park development in Columbia East (east of 82 nd Avenue) that expand employment opportunities supported by proximity to Portland International Airport and multimodal access.	Support
7.46 Sensitive habitats	Enhance grasslands and wetland habitats in the Columbia Slough, such as those found in the Smith and Bybee Lakes and at the St. John landfill site, to provide habitat for sensitive species, and for wildlife traveling along the Columbia and Willamette river migratory corridors.	Support with clarification that grasslands do not include areas where dredge material deposition has occurred.
Chapter 7	Culture, cultural has been introduced into this chapter: bullet 1, p7-1; paragraph 1, p7-3; Goal 7.B, p 7-9	Remove "cultural" and "cultural values" from this section. It lacks definition and context.

	Natural hazards are treated as something to be avoided in the policy section, p 7-10 when in fact they are a component of well-functioning ecosystems. A healthy natural system has a healthy occurrence of natural hazards.	Rewrite policy paragraph 2, p7-10 to clarify that natural hazards are a function of well- functioning ecosystems and should not be eliminated.
Policy 7.4.a	Added language covers wetlands and other water bodies	Remove addition of wetlands and water bodies as providing meaningful carbon sequestration function.
Policy 7.9 Habitat and biological communities	Bullet added states: Support recovery of species under the Endangered Species Act, and prevent new listings	Restate: Strike PREVENT, replace with "preclude the need for new listings."
		We are uncertain as to why the city would act to prevent new listings when they might be needed to protect or recover a species.
Policy 7.15 Brownfield remediation	Improve environmental quality and watershed health by promoting and facilitating brownfield remediation and redevelopment that incorporates ecological site design and resource enhancement.	Restoration should be tied to redevelopment, not remediation. The immediacy of remediation and its positive impact on the environment should stand alone. Change to: Improve environmental quality and watershed health by promoting and facilitating brownfield remediation. And promote and support redevelopment that incorporates ecological site design and resource enhancement.
Policy 7.25 Mitigation effectiveness		Remove policy 7.25. This detail is better suited for specific code sections in Title 33.
Policy 7.37 and 7.47 Contaminated sites	Ensure that plans and investments are consistent with and advance Promote and support programs that facilitate the cleanup and reuse, and restoration of the Portland Harbor Superfund site and other contaminated upland sites.	Change policy as follows: Promote and support programs that facilitate the cleanup and reuse of the Portland Harbor Superfund site and other contaminated upland sites.

7.49 Portland International Airport	New policy: Protect, restore, and enhance natural resources and functions in the Portland International Airport plan district, as identified in the Portland International Airport/Middle Columbia Slough Natural Resources Inventory. – Accomplish this through regulations, voluntary strategies, and the implementation of special development standards.	Support
9 .5 Mode Share Goals and Vehicle Miles Travelled Reduction	A goal should be added for reducing vehicle hours of delay.	Reducing vehicle miles travelled doesn't necessarily reduce emissions if vehicles are idling in traffic and spending more time to travel less miles. There is also an economic cost for Portland businesses associated with vehicle congestion.
TSP Project List	The City of Portland Major Projects and Programs List has some funding for freight mobility projects and programs but the majority of freight mobility projects are on the separate Other Agency Major Projects list.	For the City to be able to support the benefits derived from its role as a major freight hub and to be able to provide good access to industrial lands the City should cooperate with other agencies such as the Port in funding and implementing freight mobility projects.