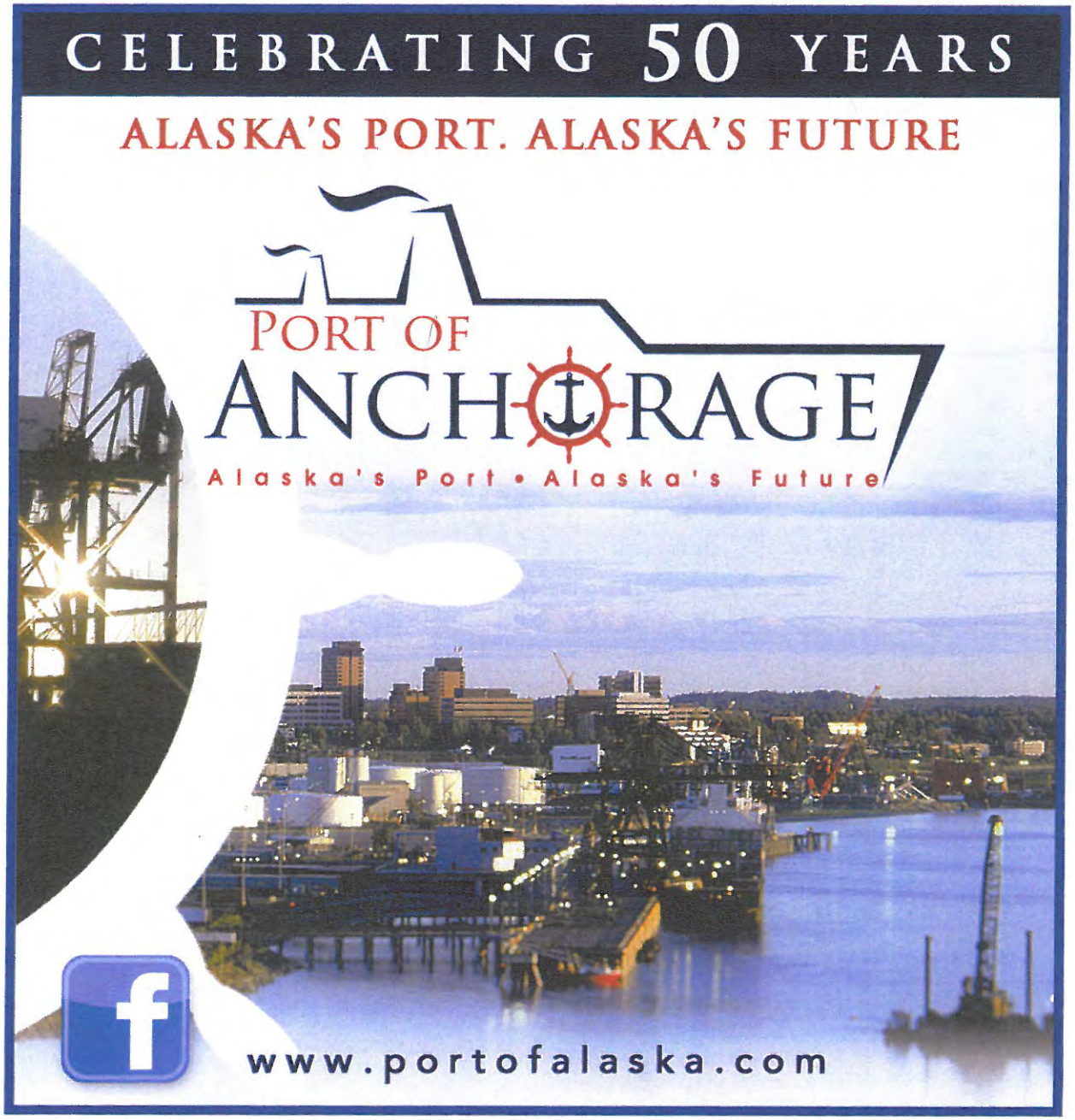
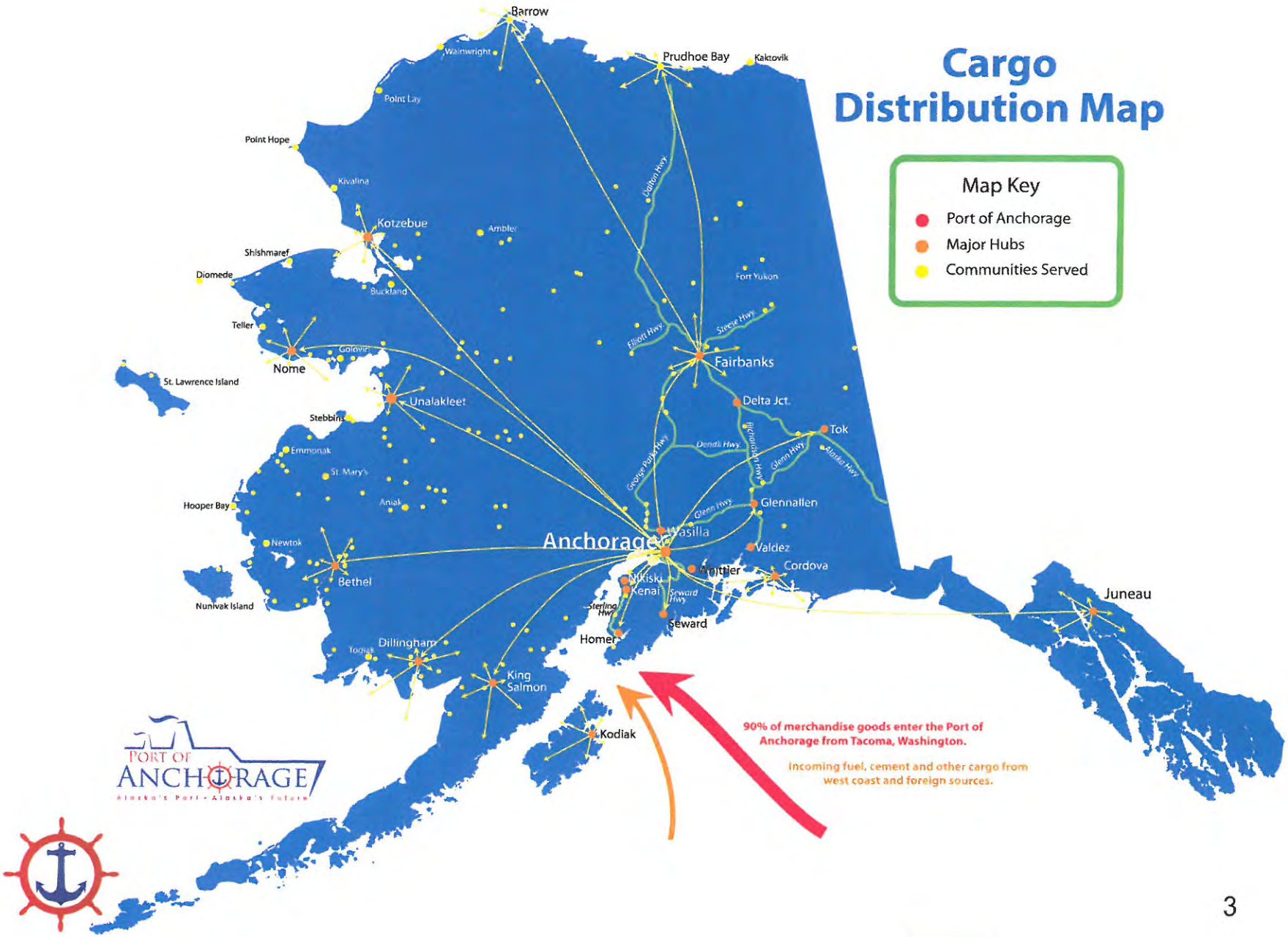
Emily Cotter – Gov Affairs



Facts about the Port

- The major point of entry for containerized cargo in Alaska
- Services support over 200 rural communities in the State
- Annually, 240,000 containers move through the Port
- Since 2000, an average 4 million tons of goods and materials pass through the Port's facilities annually
- 90% of merchandise goods for the Railbelt and interior Alaska.\
- 100 million pounds of bypass mail items
- 52,000 vehicles processed annually on average
- 80% of the cement for concrete

Cargo Distribution Map



Fuel Services & Military Support

Fuel Services:

- 11 million barrels of fuel annually
- 2/3 of the jet fuel for Ted Stevens Anchorage International Airport
- 100% of the jet fuel for Joint Base Elmendorf-Richardson
- 2/3 of all fuel used by the military in Alaska
- 1.4 million barrels of fuel are shipped from POA to rural Alaska

Military Support

- Designated a Department of Defense National Strategic Seaport
- One of only 19 ports in the nation to have this designation
- Supported over 30 deployments since 2005, including Stryker Brigade deployments to Iraq and Afghanistan

Employment & Payroll

- Regular Operations:
- $50 million aggregate annual payroll from Port Stakeholders
- Ship days over 3,600 vehicles moving through port
- Non-ship days over 600 vehicles

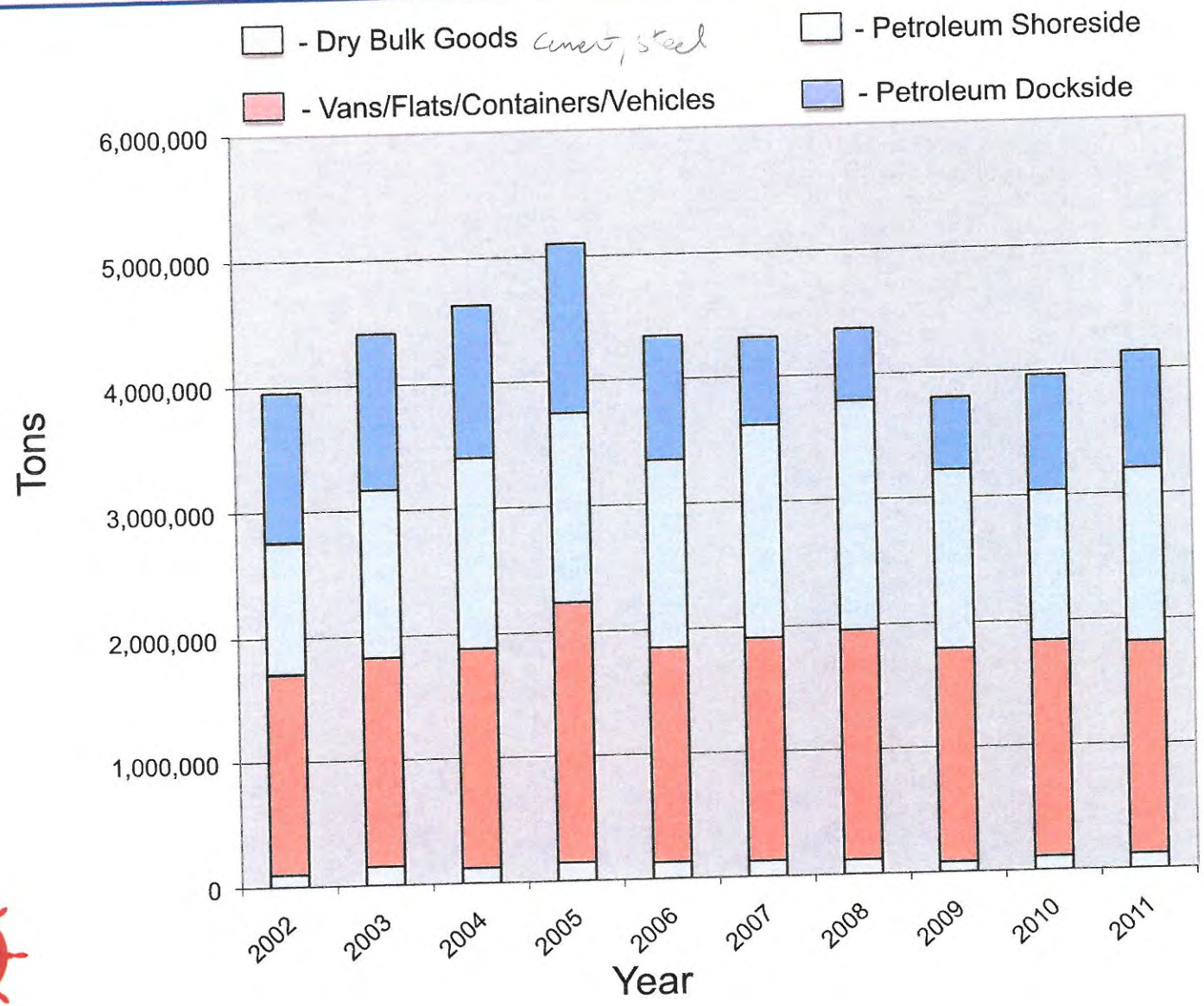
- Expansion Project:
- Directly employs 150-200 tradesmen & women annually
- Over 200 companies involved in project from 2005 - 2009

Port Stakeholders

A "stakeholder" is a company that relies regularly on the Port facilities to conduct routine business and/or leases port property.

- Horizon Lines
- Totem Ocean Trailer Express (TOTE) } Container Shippers
- Alaska Basic Industries (ABI)
- Tesoro Alaska
- Crowley Marine Services
- Aircraft Service International Group (ASIG)
- Flint Hills Resources
- Alaska Railroad Corporation
- U.S. Army – Alaska and U.S. Transportation Command's Surface Deployment & Distribution Command (SDDC)
- Cook Inlet Tug and Barge

Annual Dock Tonnage



Revenue & Operating Projections

(in Millions)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	$12.3	$13.6	$15.4	$15.5	$16.5	$16.8	$16.9	$17.3	$17.4	$17.8	$18.9
Expenses	$11.1	$12.0	$12.0	$14.3	$14.5	$14.4	$14.6	$14.7	$14.8	$15.6	$15.9
Projected Net Income	$1.2	$1.6	$3.3	$1.1	$2.0	$2.4	$2.4	$2.7	$2.6	$2.2	$3.0
Plus Depreciation	$4.3	$4.7	$4.7	$7.0	$7.1	$7.2	$7.3	$7.3	$7.4	$7.5	$7.6
Projected Cash Flow	**$5.5**	**$6.3**	**$8.1**	**$8.1**	**$9.2**	**$9.6**	**$9.6**	**$10.0**	**$10.0**	**$9.7**	**$10.6**

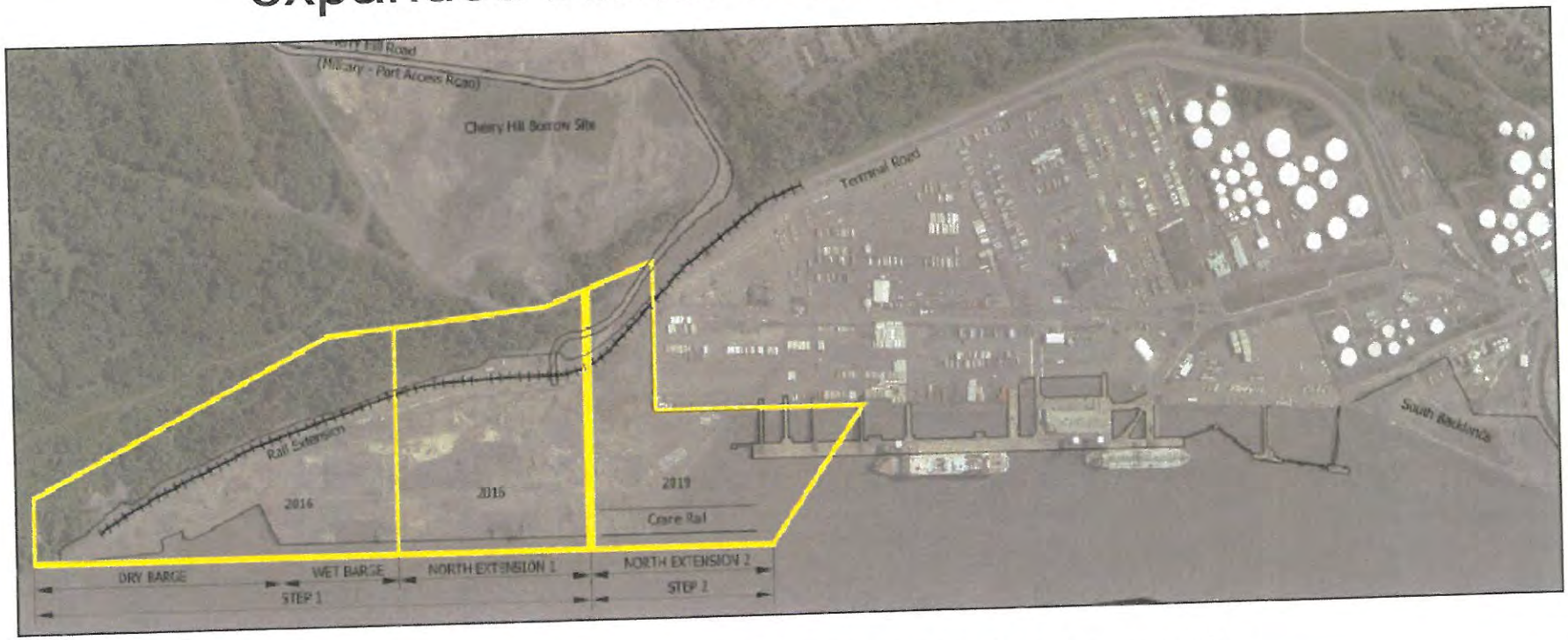
The expenses and revenue projections include projected maintenance costs for the newly constructed areas.

NOTE: The Port of Anchorage covers all of its own operational costs and reserves its profits for the project.

The Port is 50 years old and in a deteriorated condition.

The Port requires costly annual repairs, and is vulnerable to failure during a high magnitude earthquake.

The Project will replace the current container facilities while providing modern, reliable and expanded infrastructure for our future.



- 2 new ship berths
- 2 new barge berths
- Ability to accommodate larger ships
- Improved seismic capacity
- Secure access to JBER
- 65 acres of land for commercial/industrial use

Expanded Opportunities

Recent Customers

BP & ExxonMobile – Drill Pipe for the North Slope Operations
U.S. Army - Alaska - Military Deployments
Chugach Electric – Sub-station infrastructure
Film Productions – Big Miracle
Holland America – 7 to 9 summer port calls

New Customers

Tetrotech – CIRI Fire Island Wind Farm turbines & construction equipment
A Refined Petroleum Storage Facility/Barge Operator
A Container Barge Operator
Alaska Basic Industries – Planned storage expansion
USS Anchorage – Commissioning ceremony

Future Possibilities

Current Petroleum Tenant – Addition of a new product line
Film Productions
Resource development projects – Gasline, dam, etc.

Fee in lieu of taxes to MOA
500 to 700K per year

Funding

The project has been funded through a combination of port, state and federal funds.

$331 million received to date:

Federal Funds	$138.7 million
State Funds	$ 121.3 million
Port of Anchorage Funds	$ 71.0 million

- The Port also qualifies for a $75 million line of credit and is currently allowed to draw up to $51 million. Currently it has drawn $40 million of this credit line.
- The Port has also put $31 million towards the project from savings and revenues since 2001.

State Funds Received

Year	Amount	Bill
2002	$5,853,658	SB 29
2004	$436,505	SB 283
2005	$10,000,000	SB 46
2006	$10,000,000	SB 231
2008	$15,000,000	SB 221
2008	$10,000,000	SB 221
2009	$10,000,000	SB 75
2009	$10,000,000	SB 75
2010	$20,000,000	SB 230
2011	$30,000,000	SB 46
Total	$121,290,163	

Federal Funds Received

FY	DoD	FHWA	FTA	SDDC
2002	-	$9,568,421	$2,832,968	
2003	$4,850,000	$590,500	$2,862,505	
2004	$4,850,000	$1,371,058	$5,181,803	
2005	$4,850,000 $7,153,750	$4,149,039 $580,545	-	
2006	$8,245,000	$4,179,613 $1,169,645	$5,577,500	
2007	$9,700,000	$1,562,916 $4,467,940	$5,820,000	$1,957
2008	$10,804,618	$1,568,490 $4,483,847	$6,305,000	
2009	$10,000,000	$2,463,192 $6,466,443	$6,547,500	
2010	-	-	$472,390	
Total:	**$60,453,368**	**$42,621,649**	**$35,599,666**	**$1,957**
Total Federal Funds: $138,676,640				

Funds Expended on Project

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	**Total**
(Millions)	-	$6.6	$18.3	$19.6	$10.5	$43.7	$63.3	$63.4	$39.6	$36.5	$301.5

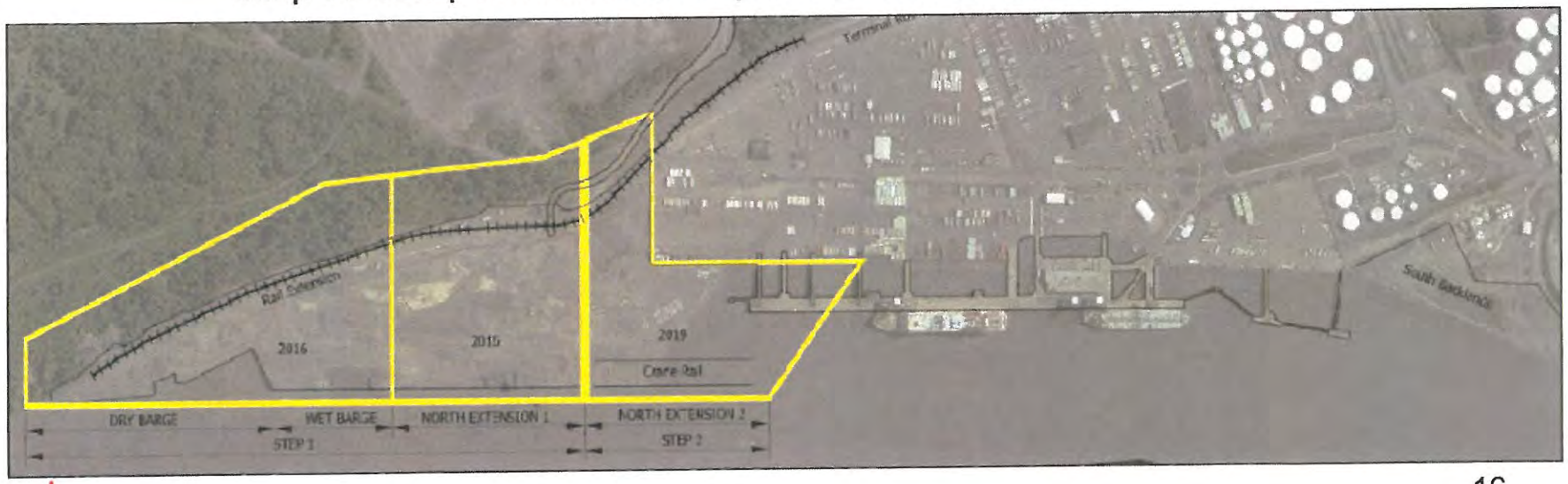
- Baseline site assessment, scientific studies, permitting & environmental impact assessments
- Instituted environmental impact avoidance, minimization, and/or mitigation measures
- Over-water Geotechnical Program:
  -sampling, analyses, seismicity studies, design enhancements, and optimized dredging specs
- Hydrologic & hydraulic modeling for harbor sedimentation and icing studies
- Geotechnical Analysis: Borings, Analysis, Design Changes
- Extracted, tested, sorted, transported and placed structural fill to create 65 acres of useable new land
- Completed dry barge berth with limited operational capacity
- Constructed 5 mile haul connecting POA to Joint Base Elmendorf Richardson (JBER) allowing secured military deployment, an emergency evacuation route and off-road gravel transport.
  -This road is already being used for military deployments, relieving congestion on public roadways.
- Cleared land, opened and operated two gravel extraction borrow pits on JBER
- Realigned Terminal and Tidewater roads with enhanced intersections, track & fuel line crossings, & safety upgrades
- Demolished unserviceable track and installed upgraded, extended track with tie-in to the ARRC rail line
- Installed a new dedicated ultra-low sulfur diesel line
- Manufactured and installed a customized floating dock for the Coast Guard for Emergency Response
- Buried, upgraded and extended power lines and critical drainage systems
- Completed sheet pile inspections establishing the integrity of the structure

Funding

State Funding Needed: $350 million
This funding is based on the February, 2011 ICRC cost estimate to complete two barge berths and two ship berths in the northern project area.

The construction will be completed in two steps so as not to interrupt our commercial shippers.

Step 1: complete two barge berths and northern ship berth
Step 2: compete second ship berth with crane rails



Project History

1999 The Port's 10-year Master Plan recommends an expansion program to meet future needs.

2003 The Port partners with the U.S. Maritime Administration (MARAD) to implement the program.

2005 The preferred alternative is selected (current project design) and the permitting process begins.

2006 Terminal Road Rail Extension and Coast Guard floating dock completed.

2007 The project receives final permits.

2008 North and South Backlands filled and Port/Tidewater Rd. improvements completed. Bulkhead construction in the northern phase begins.

2009 Dry Barge Berth bulkhead and mooring complete. Bulkhead construction continues. The port is made aware of problems in the spring of 2009.

2010 Bulkhead construction halted when the extent of the damage was revealed.

2011 Work focused on completing sheet pile inspections to establish the integrity of the structure.

Old Paradigm

Federal Lead Agency

MARAD

US DOT Maritime Administration

•Contracting & procurement authority, oversight and quality assurance and management of project funds.

Project Owner

Port of Anchorage

Municipality of Anchorage

• Securing funding and coordinating the construction phasing to fit the port's needs.

Project Manager

ICRC

Integrated Concepts & Research Corp.

• Project development & management, design, construction and permitting activities.

Design & Construction Subcontractors

New Paradigm

Old Paradigm Problems:

- No direct authority over project contractors by Port/Muni.
- No on-site MARAD representative at Port.
- No direct liability or bonding protection for Port/Muni.
- No Port directed construction oversight authority.

New Paradigm Solutions:

- New agreement establishing oversight committee.
- On-site MARAD representative.
- A performance bond has been established for Port/Muni.
- On-site construction observers reporting directly to Port.
- Direct involvement in quality control & assurance program and monitoring.
- Established a technical review committee.

Enacted Solutions

In September, 2011, the Municipality of Anchorage signed a new Memorandum of Agreement with MARAD. The new agreement provides increased accountability from all parties and ensures local control of the project moving forward.

The 2011 agreement:

- Formalized the Project Oversight and Management Organization giving the Port & Muni a decision making role in all aspects of the project.
- Ensures that MARAD will place a full-time representative at the Port.
- Increases liability and performance bond coverage for the Muni
- **Transfers all contracting and procurement responsibilities from MARAD to the Muni or their designee by May 31, 2012.**

Establishing Control

Additional measures have been taken to ensure the success and accountability of future construction.

- The U.S. Army Corps of Engineers is conducting an independent design review and an analysis of the work completed to date.
- The U.S. Department of Transportation's Office of the Inspector General is conducting an audit of MARAD's contracting and procurement methods in its port development program using the Port of Anchorage as a case study.
- MARAD has engaged AECOM, a nationally known company, to conduct a "root cause" analysis of work performed prior to 2010.

For more information please review the quarterly reports we have submitted to the legislature. They are available on our website at www.portofalaska.com

Website:
www.portofalaska.com

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www.facebook.com/portofalaska

Galvanized open cell sheet pile
w/ cathodic protection → 100 year life

MUNICIPALITY OF ANCHORAGE

Office of the Mayor

Mayor Dan Sullivan

Phone: 907-343-7100
FAX: 907-343-7180

January 13, 2012

Honorable Gary Stevens
Senate President
Alaska State Legislature
State Capitol Room 111
Juneau, AK 99801

Honorable Mike Chenault
Speaker of the House
Alaska State Legislature
State Capitol Room 208
Juneau, AK 99801

To Senate President Stevens and House Speaker Chenault:

Included with this letter is the quarterly report for the fourth quarter of 2011 from the Municipality of Anchorage regarding the Port of Anchorage Intermodal Expansion Project (PIEP) submitted in accordance with the reporting requirement pursuant to Section 1, Chapter 5 FSSLA 2011 (pg. 20, line 16-18). This section requires the Municipality of Anchorage to submit quarterly progress reports detailing cost overruns and significant project scope changes.

This report addresses both of those requirements while explaining some of the major changes underway with the project. Additional information is available on www.portofalaska.com or by request. Please do not hesitate to contact me if you require any further assistance.

Sincerely,

Dan Sullivan
Mayor

INTRODUCTION

The Port of Anchorage (POA) is Alaska's Port and serves as a critical lifeline to the state. The Port supports twice-weekly shipments of goods transported on container ships, whose cargo accounts for an estimated 90% of the merchandise goods used in 85% of Alaska's populated areas. In addition to merchandise cargo, the Port is a major fuel hub providing critical supplies of jet fuel, gasoline, heating oil, diesel and aviation gas to communities throughout the state. It also serves as a major source of cement and other building materials.

The Port celebrated 50 years of service in 2011, and although the facilities remain operational, the dock has surpassed its life expectancy and is in a deteriorated condition. In 2003, the POA and the Municipality of Anchorage (MOA) along with the U.S. Department of Transportation Maritime Administration (MARAD) undertook the Port of Anchorage Intermodal Expansion Project (PIEP) in an effort to replace and expand the existing facility to provide modern, efficient and reliable marine infrastructure for Alaskans. The project is currently focused on construction of facilities to the north of the existing dock (Phase 1)[1]. For a detailed history of the project please refer to the 2011 Second Quarter Report.

During the third and fourth quarters, significant efforts towards initiating long-term changes were formally implemented by the MOA/POA, MARAD, and the U.S. Army Corps of Engineers (USACE). These efforts include:

- The MOA/POA executed a new Memorandum of Agreement with MARAD. This agreement further clarifies the roles and responsibilities of each entity through May 31, 2012, at which time all design and construction will be the responsibility of the MOA/POA, or their designee.

- The MOA/POA and MARAD have engaged the USACE to conduct a suitability study and analysis of the project work to date.

MEMORANDUM OF AGREEMENT

In October 2011, the MOA signed a Memorandum of Agreement with MARAD to develop the Port of Anchorage Intermodal Expansion Project. This agreement was designed to improve upon an earlier agreement signed in 2003. The details of this agreement were provided in the 2011 Third Quarter Report and include the transfer of design and construction management responsibilities from MARAD to the MOA/POA, or their designated agent, by May 31, 2012; the formalization of the Project Oversight and Management Organization (POMO) team; and additional items designed to emphasize effective project planning and execution.

SUITABILITY STUDY AND PROJECT ANALYSIS

MARAD has funded the USACE to review the design for the ongoing Intermodal Expansion Project. Ultimately this review is composed of an independent study of the

[1] Appendix A: Port of Anchorage Intermodal Expansion Project Phasing Plan

foundation design and a review by USACE of the planning, design, permitting and construction with a focus on evaluating what has been accomplished and recommendations for moving forward.

The USACE selected CH2MHill in September to conduct an independent study of the foundation system designed to support the Port's expansion efforts, and this effort is underway. In analyzing the foundation design, the study will assess the effects of hydrologic, geotechnical, structural and seismic conditions. CH2MHill is bringing together a strong team of port design experts and finite element modeling capabilities to accomplish the analysis.

So that the project can move forward as expeditiously as possible, the suitability study and project analysis is expected to be complete in April, 2012.

2011 CONSTRUCTION STATUS

Like other areas within the state, most construction activities are limited to early spring, summer and fall seasons with regular shutdowns scheduled for the winter months. Earlier work in the 2011 construction season included dismantling a section of damaged sheet pile in the wet barge berth area and conducting tail wall inspections in the ship berthing areas in order to establish the integrity of the current structure. The projected budget for project related work including construction, design and support services is $37.4 million.

The construction contractor, West Construction, successfully completed removal of a section of sheet pile in the damaged wet barge berth. Tail wall inspections were completed in a portion of the North Extension 1 ship berth area and no damage was found in the areas inspected. The site is being re-established by conducting vibracompaction in the areas disturbed.

Table 1: Funding Snapshot as of November, 2011

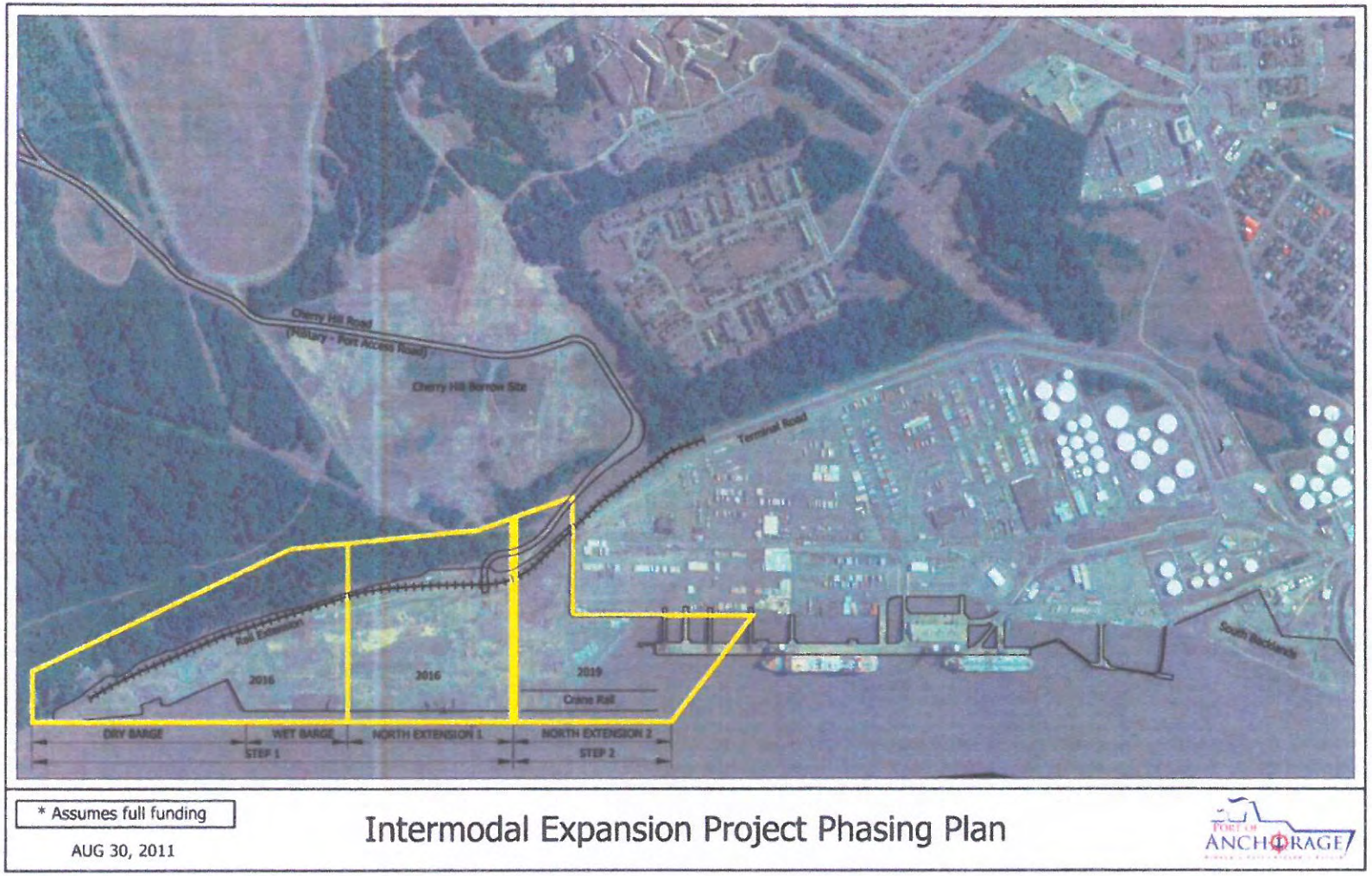
Total funds received	$332 million
Total funds transferred to MARAD	$302 million
Total funds obligated	$289 million
Total Funds Pending obligation	$13 million

For a summary of the Expansion Project's funding to date please see Appendix B.

CONCLUSION

Significant changes were initiated this fall to transition the project from its previous form of contract management and oversight to a new team experienced in delivering marine infrastructure projects. Work has been focused on the planning and review efforts necessary to implement these changes in 2012. These changes will improve project delivery and ensure future success.

APPENDIX A: Port of Anchorage Intermodal Expansion Project Phasing Plan (highlighted area indicates Phase 1)



APPENDIX B: FUNDING SUMMARY –

Of the $332 million received, $302 million have been transferred to MARAD. Currently all federal funds appropriated to the PIEP are transferred directly to MARAD, however state and port funds are transferred to the project as needed so the remaining balance of funds in MARAD's account is not necessarily an accurate indicator of the state and port funds available at any given time.

Table 1: Funding Snapshot as of November 30, 2011

Total funds received	$332 million
Total funds transferred to MARAD	$302 million
Total funds obligated	$289 million
Pending 2011 obligations	$13 million

Table 2: State funds received to date

Year	Amount	Legislation
2002	$5,853,658	SB 29
2004	$436,505	SB 283
2005	$10,000,000	SB 46
2006	$10,000,000	SB 231
2008	$25,000,000	SB 221
2009	$20,000,000	SB 75
2010	$20,000,000	SB 230
2011	$30,000,000	SB 46
Total	121,290,163	

Table 3: Federal funds received to date

Year	DoD	FHWA	FTA	SDDC
2002	-	$9,568,421	$2,832,968	
2003	$4,850,000	$590,500	$2,862,505	
2004	$4,850,000	$1,371,058	$5,181,803	
2005	$12,003,750	$4,729,584	-	
2006	$8,245,000	$5,349,258	$5,577,500	
2007	$9,700,000	$6,030,856	$5,820,000	$1,951
2008	$10,804,618	$6,052,337	$6,305,000	
2009	$10,000,000	$8,929,635	$6,547,500	
2010	-	-	$472,390	
2011	-	-	-	
Total	$60,453,368	$42,621,649	$35,599,666	$1,951
Total Funds	$138,676,634			

Alaska's Lifeline

Cargo Distribution Patterns from the Port of Anchorage to Southcentral, Northern, Western and Southeast Alaska

PORT OF ANCHORAGE

Alaska's Port • Alaska's Future

University of Alaska Anchorage
College of Business & Public Policy
Department of Logistics
and
Port of Anchorage
Municipality of Anchorage

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Phone: 907-343-6200
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February 2011

EXECUTIVE SUMMARY
PORT OF ANCHORAGE CARGO DISTRIBUTION STUDY

The sources for the data in this executive summary are extensively referenced in the body of this study.

Goods shipped through the Port of Anchorage (POA) reach almost every Alaska community making the POA arguably one of the most important infrastructure facilities in the State of Alaska. The data presented in this report shows the entry points and distribution channels of critical cargoes that drive Alaska's economy and bring Alaskans the consumer goods and business supplies essential to the state's economy and daily life.

For the vast majority of Alaskans, the Port of Anchorage **is** Alaska's Port. The annual cargo entering the Port of Anchorage accounts for 90% of the merchandise goods used by Alaskan communities west of Cordova. This study will help inform public policy decision at the state and federal level to determine the level of public support that is justified for the Port expansion project.

Nearly all of the container goods that make up the day-to-day items used by Alaskans originate in shipments from the Port of Tacoma to the Port of Anchorage (POA). These shipments represent a critical lifeline for Alaska and amount to nearly 30 percent of Tacoma's total cargo activity. The total value of these goods is estimated to be well over $1 billion annually according to a study by the Port of Tacoma and the Seattle Chamber of Commerce.

Once these cargos enter Alaska through the Port of Anchorage, they are distributed throughout the Railbelt by truck, train, and to rural Alaska by air and barge. Ninety percent of the goods delivered to Fairbanks and the Mat-Su area originate in shipments through the Port of Anchorage as do seventy-five percent of the goods consumed in Western and Northern Alaska. A substantial amount of POA originated cargo is shipped via air freight to Southeast Alaska and 28.5 million pounds of US Postal Service Standard mail arrives in the state annually through the Port.

The POA is also a major entry point for fuel. On average, two-thirds of the fuel for air carriers at Ted Stevens Anchorage International Airport, and two-thirds of the fuel used by the US military and federal government agencies in Alaska, are delivered through the Port. This includes 100 percent of the jet fuel for Elmendorf Air Force Base and Fort Richardson- now Joint Base Elmendorf-Richardson (JBER). Smaller aircraft around the state are particularly dependent on Port operations because all in-state aviation gasoline (avgas) passes through the Port. Additionally 90 percent of the fuel Alaskans use to operate their vehicles and water craft originates in POA deliveries.

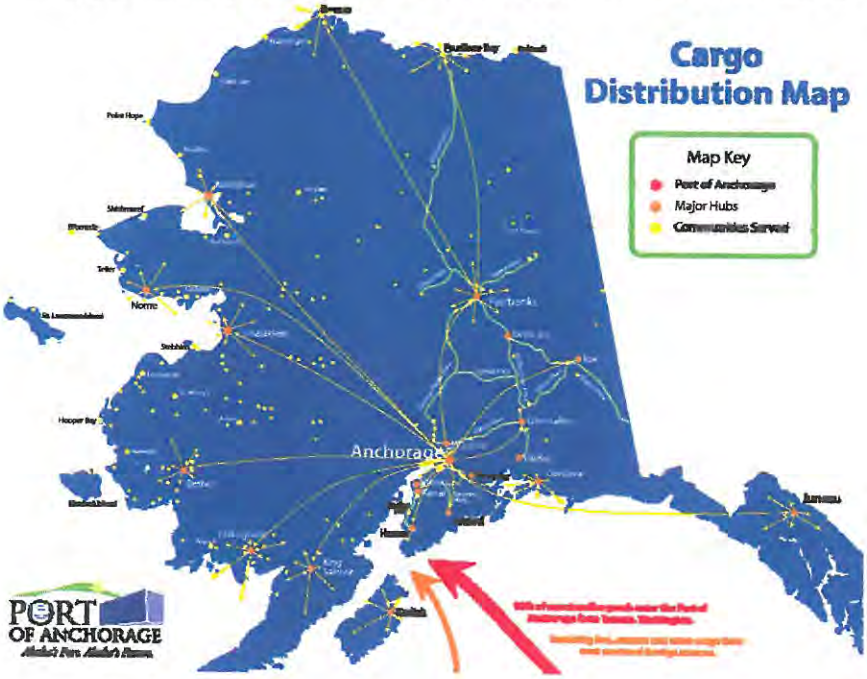
The Port of Anchorage is the only port in Southcentral that has the capability to offload bulk cement in unsacked powder form. As a result, over 80 percent of the cement used for concrete construction in the state comes into the Port annually, enough to build a four foot wide sidewalk from Homer to Barrow and back.

The Port is essential to the Armed Forces and was designated one of only 19 National Strategic Seaports by the Department of Defense. The US Armed Forces have staged over 20 military deployments through the Port of Anchorage in the past 10 years, including Stryker Brigade deployments to Iraq and Afghanistan. In a 2009 letter to the U.S. Secretary of Transportation, Raymond LaHood, U.S. Senator Daniel Inouye calls the Port of Anchorage "vital to our nation's defense" citing its service to all five military bases saying "the port is essential in serving the thousands of Army and Air Force personnel that call Alaska home." He continues on to say that "without the Port of Anchorage, these key military bases and activity would be out of business."

The Port of Anchorage makes a substantial contribution to Alaska's economy not only through the goods and cargoes which enter the port, but also through jobs and associated payroll. Total payroll at the Port for direct operations exceeds $53 million per year. An additional $20 million dollars per year in construction wages supports around 500 jobs and is expected to continue through 2021. The associated railroad, trucking and air cargo operations (delivering Port of Anchorage sourced goods at the regional air hubs of Fairbanks, Bethel, Nome, Dillingham, Kotzebue and Barrow) also make a significant contribution to many local economies.

Four container ships per week supply the vast majority of consumer goods and business supplies to Alaskans. In the course of this study we discovered that most retail companies, non-profits and government agencies reported that they would reach a crisis mode within two weeks if service was disrupted.

This study also identifies some of the issues that could substantially increase operating costs within the distribution system, and ultimately, the cost of goods to Alaska consumers. One example is increased fees and tariffs to pay for the Port of Anchorage Intermodal Expansion Project should local bonding be required. Federal issues include proposed changes to the bypass mail system, elimination or reduction of the Essential Air Service Program, new requirements for marine vessels to use ultra-low sulfur diesel, and any initiation of federal container taxes. Each of these issues could have a significant impact on the cost of goods to Alaskans.



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ABBREVIATIONS

AEDC – Anchorage Economic Development Corporation
ARRC – Alaska Railroad Corporation
ASIG – Aircraft Service International Group
AS&G – Anchorage Sand and Gravel
CIRI – Cook Inlet Region Incorporated
DLA – Defense Logistics Agency
DOD – Department of Defense
ECA – Emissions Control Area
Horizon – Horizon Lines, Inc.
IMPLAN – Impact M for Planning, a multiplier for economic impact calculation developed by the US Department of Agriculture Forest Service
ISER – Institute of Social and Economic Research, University of Alaska
JBER – Joint Base Elmendorf-Richardson
LO/LO – lift-on/lift-off operations
MLLW – Mean Lower Low Water
PANAMAX – The maximum sized vessel that will fit through the Panama Canal
POA – Port of Anchorage
POL – Petroleum Oils and Lubricants
RO/RO – roll-on/roll-off operations
TOTE – Totem Ocean Trailer Express
ULSD – Ultra-Low Sulfur Diesel
USCG – United States Cost Guard
USPS – U.S. Postal Service

STUDY PURPOSE AND METHODOLOGY

The purpose of this study is to describe the distribution patterns of goods which enter the Port of Anchorage (POA) and are delivered to Southcentral, Interior, Northern, Western and Southeast Alaska. The information from this study is intended to inform the general public and public policy makers on the importance of the Port's operations to Alaska's people and businesses.

The study methodology was to collect all available and relevant data on incoming volumes of cargo entering the Port of Anchorage utilizing published documents, port data and interviews with port operators. The final cargo destinations within Alaska and the patterns of freight distribution were further determined through interviews with freight forwarders, trucking, railroad and air freight operators along with retail and government related customers.

To better illustrate the patterns of freight distribution, the data was arranged according to the following tiers:

I. The first tier consists of shipping companies and operators who deliver cargo to the POA including containerized cargoes of consumer goods and business supplies, fuel, cement, construction materials, military equipment, building materials, automobiles and commercial vehicles.

II. The second tier is made up of trucking and rail operations which move goods from the POA to a secondary location. There they are either delivered directly to retail markets or consolidated and shipped via a third tier transporter to a further destination.

III. The third tier is comprised of air cargo carriers and barge operators who ship consolidated freight to hub airports and local harbors via bypass mail, air freight and barge operations. Once received at a hub airport or harbor, the freight is then further broken down for delivery by smaller air carriers or barge shippers for final delivery to rural villages.

IV. The fourth tier includes those goods delivered to the Port of Anchorage and then transshipped to Kodiak, Dutch Harbor and Western and Northern Alaska by container ship and barge. This includes consumer goods and business supplies, fuel, construction materials, automobiles and commercial vehicles.

Data on incoming fuel, cement and military supplies were also analyzed to determine their sources and patterns of distribution.

The Port is committed to treating any proprietary data in a confidential manner and informed study participants that such data would be aggregated to ensure confidentiality. As a result, much of the data is described in overall terms or percentages, nevertheless it clearly indicates the patterns of distribution.

The total payroll of Port stakeholders was collected from operators to help illustrate the economic impact of direct Port operations on Alaska's economy. This data was aggregated into a total payroll amount and was interpreted by Dr. Darren Prokop, UAA Professor of Logistics. The Alaska Trucking Association and the Alaska Association of Air Carriers provided additional information to help assess the value of trucking and air cargo operations to Alaska's economy.

In the course of interviewing participants in the distribution chain, issues of concern were raised that could affect the cost of delivery of goods throughout Alaska including the costs of developing the Port if local bonding were required, changes or reductions in the bypass mail system, requirements for marine vessels to use ultra-low sulfur diesel fuel, and any change in container taxes. These concerns are addressed at a cursory level towards the end of this study.

Participants also identified several inefficiencies in current Port operations that could be improved as a result of the new Port design. This information is contained in *Commodity Details and Port Efficiency Issues* on page 15.

Participants were asked to identify the impact on their businesses should there be any disruptions to Port of Anchorage operations. A summary of their responses is contained on page 18 under *Interruption of Service.*

This study was sent in draft form to all participants for review to identify any omissions or errors. A complete list of companies interviewed for this study can be found on page 25.

ABOUT THE AUTHORS

This study was conducted under the supervision of Dr. Darren Prokop, Professor of Logistics at the College of Business and Public Policy at the University of Alaska, Anchorage (UAA). Primary research for the project was conducted by Paul Fuhs under the supervision of the Port of Anchorage. The project was assisted by University of Alaska Anchorage student interns Duke Kahumoku (majoring in Political Science) and Grigory Kalugin (majoring in Logistics).

A NOTE FROM THE AUTHORS

The authors would like to thank all the companies who participated in this study. Their cooperation was freely given and their support is very much appreciated. Too often this sector of our economy is taken for granted as essential items appear each week on the shelves without any thought as to how they got there.

This study contains data and statistics, which when taken together, are quite remarkable. As different sectors of the industry were interviewed, it became apparent that behind the numbers there are very real Alaskans, all pulling their weight in a complex and sometimes dangerous system that requires each leg to work all the time, every time, in order to be successful. This silent, steady system is what keeps Alaska's economy alive, its what keeps food in the house and pencils on the desks. This study is a way of recognizing what these companies and people do for the citizens of Alaska every day.

BACKGROUND ON CURRENT PORT OPERATIONS AND PORT REDEVELOPMENT PLANS

The current Port facility has four ship berths and a published draft depth of -35 ft mean lower low water (MLLW) which easily accommodates ships requiring 30 feet of draft. The two northern berths are container ship berths used primarily by Horizon Lines and Totem Ocean Trailer Express (TOTE). A container ship from each of these companies travels from the Port of Tacoma to call on the POA twice a week on Tuesdays and Sundays. TOTE offloads their cargo via Roll-on/Roll-off (RO/RO) facilities while Horizon Lines uses three 38-foot gauge container cranes to lift containers on and off their ships. These container berths are also used to accommodate cruise ship vessels during summer months and other vessels as needed. The two berths on the south end of the dock are for bulk cargo (cement) and petroleum oil and lubricants (POL). These berths accommodate fuel tankers, fuel barges, and dry bulk carriers.

The Port occupies 129 acres with 81 acres leased to long-term users and 31 acres used as transit storage for cargo including fuel tanks and cements silos. These same areas are occasionally designated for use by the Department of Defense to stage military deployments. The Alaska based U.S. Coast Guard Maritime Safety and Security Team is home ported at the POA with 75 personnel and multiple emergency response vessels.

The POA is involved in a major project to replace aging and deteriorated facilities that were built up to 50 years ago and are at risk of catastrophic failure in the event of a major earthquake[1]. The Port of Anchorage Intermodal Expansion Project began in 2002 and upon completion will add 1,700 ft of linear dock space, creating 7 functioning ship berths, two public barge berths, and an additional 135 acres of land which can accommodate industrial development activities. The project increases the operating depth of the Port to -45' MLLW and is expected to reduce dredging costs. The expansion project must be constructed in phases with new operational sections completed before abandoning the current facilities to ensure that there is no disruption of service.

Several areas of the new facilities are constructed to withstand the worst case expected earthquakes based on past history of seismic activity. They are designed to operate for 50 years without any major maintenance and an overall useful life of 75 to 100 years. The expanded facilities will also address a number of inefficiencies inherent to the current facilities which are described in this report.

[1] R&M Consultants, Inc. *Seismic Vulnerability Report.* (2009).

The Port of Anchorage operates on a self-sustaining basis. Port tariffs and fees pay for all operations and maintenance of the facility, along with a small reserve fund. This steady fiscal performance qualifies the Port for a $75 million line of credit used as part of the Port's match to state and federal funds in the ongoing expansion project.

FINDINGS OF THE STUDY

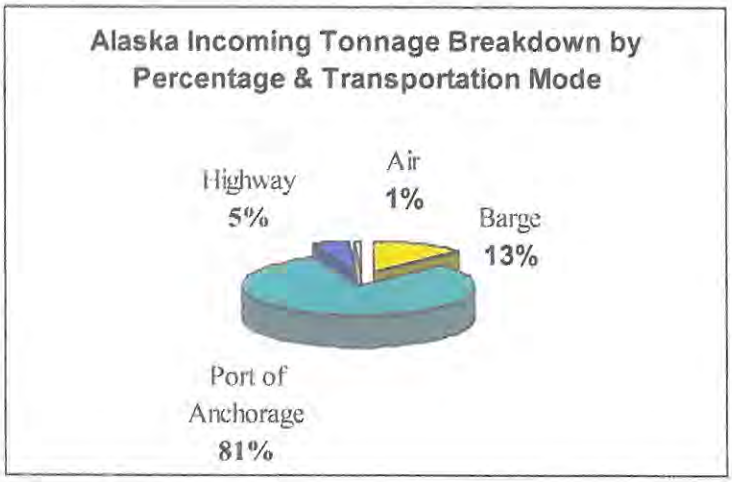
TIER I: ANNUAL INCOMING CARGO AND ORIGIN OF SOURCES

In 2009, the baseline year for complete data, the Port of Anchorage received 4,370,000 tons of cargo (8.74 billion pounds) comprised of containerized consumer goods and business supplies, US mail, fuel, construction materials, drill pipe, cement for concrete, automobiles, and military equipment.[2]

An additional 706,000 tons of annual cargo deliveries, most by barge, do not pass through the POA, but enter Southcentral Alaska through the Alaska Railroad Corporation's rail barge operations in Seward and Whittier and through barge deliveries to North Star Terminal and Stevedoring and the Swan Bay dock. These are primarily outsized and overweight loads and bulk construction supplies.[3] Around 325,000 tons of goods enter the Railbelt through trucking and airfreight.

Railbelt Alaska Incoming Tonnage Breakdown: Percentage by Facilities[4]

There are four ways of delivering goods to the Alaska Railbelt: container ship, barge, trucks, and air freight. Each delivery method is displayed by percentage in the following chart according to data from the Alaska Rail Road Corporation.



[2] Port of Anchorage, 2009 Annual Port Tonnage Report
[3] Personal Interview, September, 2010, Alaska Rail Road Corporation
[4] Personal Interview, September, 2010, Alaska Rail Road Corporation & 2009 Annual Port Tonnage Report

POA LO/LO and RO/RO Operations

Container crane lift on/lift off (LO/LO), and roll-on/roll-off (RO/RO) operations account for 1,820,000 tons annually, (120,000 incoming containers annually, or about 10,000 containers per month.)[5] TOTE's RO/RO operations also allow for the delivery of oversized loads, or just about anything that can be put on wheels.

POA container crane and RO/RO cargo is primarily comprised of consumer goods and business supplies, construction materials, and vehicles. This represents 90 percent of Railbelt and interior merchandise cargo and business supplies shipped to Fairbanks, Mat-Su and the Kenai Peninsula.[6] **Origin of Cargo:** Port of Tacoma

Non POA Barge Cargoes

Around 706,000 tons of annual cargo does not pass through the POA, but is instead transported by barge to Seward, Whittier, and private docks in Anchorage. These cargoes are mostly bulk but can also be containerized and are primarily materials such as chemicals, sack cement, grain products, construction goods, heavy industrial loads, oversized items and fuels. There are several different types of barges that use the facilities listed above including rail barges, with regular weekly service between Seattle or Price Rupert depending on the company, and fuel barges. **Origin of Cargo:** Seattle, Prince Rupert, BC

Fuel

Eleven million barrels[7] (or 462 million gallons) of refined petroleum products move through the Port of Anchorage annually on a regular basis including:

- Two-thirds of the jet fuel used at Ted Stevens Anchorage International Airport
- Two-thirds of all fuel used by military and federal agencies in Alaska
- 100 percent of the jet fuel used by Elmendorf Air Force Base
- 90 percent of the fuel used by vehicles, watercraft and general aviation aircraft in Railbelt Alaska
- 100 percent of the aviation gasoline used statewide (including Southeast Alaska)

Origin of Cargo: Flint Hills Refinery, Tesoro Refinery, Petrostar Refinery, domestic and international ships and vessels.

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[5] Port of Anchorage, 2008 Annual Tonnage Report
[6] 1999 VZM TranSystems Corp/Northern Economics, *Port Master Plan*, Page 1.C 14
[7] Port of Anchorage, Annual Dock Tonnage 2001 - 2010

Cement

An estimated eighty percent of the cement for manufacturing the concrete used in Anchorage, Fairbanks, Mat-Su, the Kenai Peninsula and the road system is delivered through the Port of Anchorage by the company Alaska Basic Industries, a division of Anchorage Sand and Gravel (AS&G).[8] Other barge operations deliver an additional 20,000 tons per year. In some cases, cement is distributed from the POA to rural areas via air freight from Ted Stevens Anchorage International Airport. To date, 78 Alaskan communities throughout the State, including the North Slope, have received cement through this distribution method.
Origin of Cargo: Korea, China, Thailand

Automobiles and Commercial Vehicles

About ninety-five percent of new private, commercial, and military automobiles and trucks bound for the Railbelt come through Port of Anchorage. On average, 50,000 vehicles pass through the POA annually.[9] **Origin of Cargo:** Port of Tacoma

Military Cargo

In addition to the fuel, military operating supplies and equipment, commissary groceries, and base/post exchange consumable and durable goods items provided through the Port of Anchorage. In a 2011 letter to Alaska's Congressional delegation, Lieutenant General Dana Atkins, Commander of Alaska Command wrote "The Port of Anchorage is not only the strategic hub for military deployments and operations, it is also one point of throughput for the commodities we stock in our base exchanges, commissaries and troop stores in support of 55,000 military and family members in Alaska."

In the past ten years the Port has supported over 20 military deployments, including deployments to Iraq and Afghanistan. Lieutenant General Atkins writes "Since 2005 almost 18,000 pieces of military cargo in the form of combat vehicles, weaponry, and support equipment have passed through the Port. Our ability to project this power to combat theaters around the globe depends heavily upon sealift through the Port of Anchorage."[10]

USPS Mail

Twenty-eight and a half (28.5) million pounds of US "standard mail" is delivered annually through the Port of Anchorage.[11] **Origin of Cargo:** Port of Tacoma

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[8] Personal Interview, Alaska Basic Industries, October, 2010.
[9] Phone Interview, Wrightway Auto Carriers, October, 2010.
[10] Letter from Lieutenant General Dana T. Atkins to the Alaska Delegation, February 9, 2011.
[11] Phone Interview, U.S. Postal Service, October, 2010.

Bulk Shipments and Construction Materials through POA

These include general construction materials, drill pipe for the North Slope and industrial structural elements. If Cook Inlet Region Incorporated (CIRI) moves forward with it planned wind energy project on Fire Island, the towers are expected to arrive in Cook Inlet by ship and be delivered to the POA for transfer by barge to Fire Island. This will be facilitated by the Port's dry barge landing facility.
Origin of Cargo: Seattle, Tacoma and International sources.

TIER II: PRIMARY DISTRIBUTION TO ANCHORAGE, INTERIOR AND RAILBELT ALASKA

Trucking operations make deliveries directly to large and small retail stores in the Anchorage bowl. Trucks also deliver containers to freight consolidators and warehouses in Anchorage who further break down the cargo for smaller deliveries.[12]

Nearly 90 percent of consumer goods and business supplies for Fairbanks, Mat-Su, and the Kenai Peninsula first enter through the Port of Anchorage. The goods are primarily transported as follows:

- 60 percent intermodal transfer to ARRC for rail transport
- 40 percent delivered by trucking operations[13]

Standard US mail shipped through the Port of Anchorage is delivered by truck to the USPS sort operation near the Ted Stevens Anchorage International Airport. After sorting, it is delivered locally by mail carriers and statewide by truck and air operations. Fuel and cement are delivered directly by truck and railcar to customers throughout the state while cement is also delivered to remote locations by air freight. Construction materials and automobiles are delivered directly by truck.

These trucking operations have a substantial impact on Alaska's economy. The American Transportation Research Institute reports that in 2008, 603 Alaska trucking companies provided 19,955 jobs.[14]

[12] Personal Interview, Alaska Trucking Association, November, 2010.
[13] Personal Interview, Alaska Rail Road Corporation, September, 2010.
[14] American Transportation Research Institute & Alaska Trucking Association, *Alaska Fast Fact.*, (2011)

TIER III: SECONDARY DISTRIBUTION OF CONSUMER GOODS AND BUSINESS SUPPLIES FROM THE PORT OF ANCHORAGE TO RURAL AND SOUTHEAST ALASKA

Surface and Air Transport of Goods

Goods designated for shipment to rural Alaska are transported primarily by trucks to distribution warehouses as stated under the second distribution tier. These warehouses and distribution centers consolidate the goods which are then further distributed to air freight and bypass mail carriers for transport to rural areas. The volume of consumer goods transported through this method is significant. According to a 2006 Northern Economics study, 75 percent of total goods move to rural Alaska through bypass mail.[15]

Air cargo and related passenger flight operations make a substantial contribution to Alaska's economy. According to the Alaska Air Carriers Association, there are 304 commercial operators in Alaska with 47,000[16] people employed in Alaska aviation. The amount of airfreight per person in Alaska is 39 times higher than the US average, amounting to almost one ton per person per year.[17] Air cargo shipments of POA originating goods are also made year round to resource development projects such as Red Dog Mine, Donlin Creek Mine, the North Slope, etc.

According to Alaska Airlines Air Freight, a "substantial" amount of POA originating cargo is sent to the Southeast Alaska communities of Cordova, Juneau, Wrangell, Petersburg, Sitka and Ketchikan. Once the cargo is delivered to these hub communities, smaller air carriers further distribute this Anchorage originating cargo to more remote villages in Southeast.[18]

Bypass Mail

Bypass mail plays a crucial role in delivering consumer goods to Western and Northern Alaska. Cargoes originating from the Port of Anchorage are delivered by truck or rail to the primary air cargo hubs of Anchorage, Fairbanks and Deadhorse. From there this cargo is flown either to the regional hubs of Bethel, Nome, Kotzebue, Dillingham, and Barrow, or flown directly to the villages. The U.S. Postal Service reports that these shipments total almost 100 million pounds per year, with 1.5 million pounds of bypass mail being shipped from Anchorage and 750,000 lbs shipped from Fairbanks every

[15] Northern Economics, *Port of Anchorage Consolidation & Distribution Study,* 2006.
[16] Alaska Department of Transportation & Public Facilities Commissioned Study, *The Economic Contribution of the Aviation Industry to Alaska's Economy,* 2008.
[17] Alaska Air Carriers Association, *Alaska Aviation Facts,* 2009.
[18] Specific cargo amounts and percentages are not available since one carrier, Alaska Airlines, flies almost all of this cargo and to publish it would reveal proprietary information.

week.[19] An additional 10 percent of cargo is flown at the full tariff air freight rate. Standard US Mail shipped through the Port of Anchorage is also delivered by air to rural Alaska.

Bypass mail provides a lower cost to consumers since air cargo is charged at "postage stamp rates" which means that cargo moves at $0.38 per pound regardless of which community it is shipped to, similar to the way a letter is charged the same rate regardless of where you are sending it. To send that same freight from Anchorage to Bethel via air freight or at standard postal rates for instance, would cost nearly twice that much. To send it to the outlying villages could cost up to 6 times that amount. The USPS pays for the difference in those prices which amounts to a "subsidy" of over $100 million per year.[20]

Bypass mail is organized into two categories:

1. Service to hubs; in planes fully loaded with cargo, or by combi service (a Boeing 737 configured for half freight in totes and half passengers) as offered by Alaska Airlines. These hubs are a legacy of the old postal hub communities. The number of providers is limited to those carriers who have provided this service in the past and have the capacity for hauling a minimum of 7,500 pounds.

2. Service to villages: Cargo is flown in conjunction with passenger flights on smaller aircraft that have at least 20 percent of the passenger market in those communities. In many cases the revenues from bypass mail are what keep these airlines serving these communities.

There is discussion within USPS of moving these hubs to communities that they estimate would be more efficient locations for them. However, this would require significant state expenditures to upgrade these airports, while current hubs have seen substantial improvements in their capabilities. Airports like Bethel, the second busiest airport in Alaska, are considering moving to a 24/7 schedule to accommodate all of their nighttime traffic in a safe and efficient way.[21] Any reductions in bypass mail service would impose a significant burden on people living in the villages who are already struggling to make ends meet due to the high cost of goods and energy.

[19] Phone Interview, USPS, October 2010.
[20] Personal Interview, Alaska Commercial Company, October, 2010.
[21] Personal Interview, Airport Manager, Bethel Airport, November, 2010.

TIER IV: CARGO TRANSHIPPED VIA WATER TO RURAL ALASKA

A significant amount of Western Alaska bound cargo is shipped by container vessel to Anchorage and then loaded to barges destined for Western Alaska. One of the barge operators serving western Alaska estimates that 25 percent of their cargo is transshipped via the Port of Anchorage. The remaining 75 percent of barge cargo is sourced directly out of Seattle.[22]

Horizon Lines has direct container service to Kodiak and Dutch Harbor/Unalaska. These ships carry cargo from the Port of Tacoma, discharge most of their cargo in Anchorage, take on additional cargo for Kodiak and Dutch Harbor and then return to Tacoma after making those port calls. They take Asian destination frozen fish from Southcentral and Kodiak to Dutch Harbor where it is loaded onto container ships headed for foreign destinations. Frozen fish from Kodiak and Dutch Harbor are backhauled to Tacoma for distribution to domestic markets.

Several consolidators and large scale retailers, such as Alaska Commercial, repackage cargo from the Port of Anchorage and then reload these containers on the Horizon vessels or Northland barges headed for Kodiak, Dutch Harbor and Western Alaska ports.

Fuel to Rural Alaska

Annually, 1.7 million barrels of refined petroleum product are shipped out of the Port of Anchorage to rural Alaska via barge[23].

Cargo Backhaul to the Port of Tacoma

On average, about 2 out of 10 containers is loaded with cargo for container ship return voyages to the Port of Tacoma. This cargo is comprised of: recycled items, frozen fish, household goods and vehicles for people moving out of Alaska, automobile and truck trade-ins, and rental car fleet inventories being returned to the West Coast.[24] As an example of how backhauled goods can have a strong impact on shipping rates, it is estimated that the backhaul of fisheries products alone can help reduce the cost of shipping goods to Alaska.[25]

COMMODITY DETAILS AND PORT EFFICIENCY ISSUES

"As Is" LO/LO and RO/RO Container Service

The current container service operated by Horizon Lines and TOTE is highly efficient. Four vessels a week supply around 90 percent of the

[22] Phone Interview, Northland Services, December, 2010.
[23] Port of Anchorage, 2009 Annual Tonnage Report
[24] Personal Interview, Horizon Lines, Totem Ocean Trailer Express, November, 2010.
[25] Personal Interview, Lynden Inc. 2010

merchandise goods and business supplies to Alaskans living west of Cordova. It is so efficient, particularly when combined with the capability for just-in-time delivery, that many retail outlets have drastically reduced, or even eliminated, their need for warehousing services. Coupled with bar code inventory systems, the products in many containers are taken from the vans and put directly on store shelves. These efficiencies allow retailers to offer a wide range of food and other commodities at a price that is little different from those in Seattle.

"To Be" LO/LO and RO/RO Container Service

When completed, the modernized Port of Anchorage will contribute to even greater efficiencies. The draft (depth) at the current dock is -35 feet, restricting the size of vessels that can call on the Port, while the three LO/LO container cranes on the current dock only have a nine container reach. A modern container ship is 16 containers wide and requires a deeper draft and larger cranes at port facilities.

The design of the new facility will provide seven berths of nearly 1,000 feet each that are capable of supporting either RO/RO or LO/LO operations, 49 feet of draft, and placement of the dock face farther out into the channel where it will be self-scouring. New container cranes will be able to reach across PANAMAX container ships, now the industry standard. These upgrades will improve the efficiency of container, commodity, RO/RO and automobile operations. Additional staging areas immediately behind the LO/LO and RO/RO operations will improve efficiencies there while construction of a railroad intermodal loading facility at the back of the port will make transfer operations to flat cars more efficient and reduce the need for drayage operations.

"As Is" Fuel Details

Fuel deliveries have been steadily increasing at the Port of Anchorage. The startup of the ultra-low sulfur diesel towers at the Petrostar facility in Valdez will further increase these deliveries to the POA. Currently about 7.7 million barrels of fuel are delivered to the Anchorage area by rail car annually.[26] An additional 4.5 million barrels come across the Port's dock.[27] ASIG operates the tank farm and valve manifolds that facilitate deliveries of jet fuel to the Ted Stevens Anchorage International Airport by pipeline.[28]

The tank farm at the airport is a subzone of the Foreign Trade Zone at the Port of Anchorage. Since most of this fuel is burned out of the US, there is a significant tax advantage to imported fuel. The crude oil refined at the Tesoro refinery in Nikiski is

[26] Port of Anchorage, Annual Tonnage Report 2010
[27] Port of Anchorage, *Annual Dock Tonnage 2001 – 2010*
[28] Personal Interviews, Petrostar Refinery, Alaska Rail Road Corporation, ASIG, October, 2010.

sourced out of Russia and UK. They also import substantial quantities of refined jet fuel from Korea.[29]

Currently, all general aviation gas (avgas) for Alaska comes through the Port of Anchorage which typically receives four or five tanker deliveries per year and are stored at the Port's tank farms. It is then distributed to Fairbanks, Mat-Su, and the North Slope by truck, and to Western and Southeast Alaska by barge. The Southeast Alaska trade in avgas is facilitated by favorable prices in Anchorage. If Southeast communities were to rely on direct tug and barge deliveries of avgas, these barges would have to travel as far as San Francisco to get avgas from the West Coast. Instead, they are serviced by tugs and fuel barges that are demobilizing from their Western Alaska trades and returning south in the fall. These tugs and barges make this return trip profitable by loading avgas at the POA and making deliveries to Southeast Alaska as they continue their return voyage.[30]

"To Be" Fuel Infrastructure Benefits

Fuel operations are also constrained by the current, limited draft at the Port of Anchorage. Larger petroleum product carriers, given the ability to make larger bulk deliveries, can potentially reduce the overall cost of fuel to consumers. Petroleum operators at the Port who supply fuel to Ted Stevens Anchorage International Airport have indicated the need for increased storage tanks to ensure deliveries of adequate volumes to cover peak periods of demand at the airport. Two dedicated POL berths with new environmentally friendly and state-of-the-art offload headers at the future petroleum docks provide opportunities for new storage capability and the ability to handle a wider variety of refined petroleum products. The newly added acreage behind the POL berths could be a siting source for additional tankage.

"As Is" Cement Offload and Storage Infrastructure

Cement is used in almost every construction project in the state, large and small. The Port of Anchorage is one of the only facilities in Alaska with bulk offloading capacity for cement ships. The ships arrive with dry cement carried in segregated hold compartments and are offloaded via a vacuum and pump system. The cement is transferred through a pipeline to storage tanks on railroad property. Trucks are used to transport the cement from the storage tanks to its final destination. Due to the limited draft at the port, the current bulk cement carrier can only load and receive 24,000 tons at a time despite the vessel's capacity of 40,000 tons.

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[29] Ostherimer, David. *Annual Report For Foreign-Trade Zone No. 160; October 1, 2008-September 30, 2009*

[30] Personal and Phone Interviews, Tesoro Alaska, September, 2010. PetroMarine, Delta Western Fuels, December, 2010.

"To Be" Cement Offload and Storage Infrastructure

Completion of the south replacement and extension phase of the intermodal expansion project will provide both a deeper depth of -45ft and new acreage for the construction of additional cement storage tanks. This could create a cost savings benefit to the shipper as they would be able to double their capacity, transporting 40,000 tons at a time while experiencing the same operational and crew cost with only a modest increase in fuel. The operators of the bulk cement facility at the Port have indicated that if they could utilize these efficiencies, they would construct additional cement silos at the Port on the newly added backlands created by the Port expansion. This would eliminate their current need to truck cement across town to a different storage facility.[31]

"As Is" Military Support

The Port of Anchorage currently serves all five military bases in Alaska through fuel, supplies, vehicles and deployments. In a 2009 letter to the U.S. Secretary of Transportation Ray LaHood, U.S. Senator Daniel Inouye (HI) wrote:

> For example, the Port of Anchorage is vital to our national defense. The Expansion project that is underway will provide further economic opportunities and further strengthen the military and diplomatic mission of the United States. The Port of Anchorage is one of only 19 ports designated by the Department of Defense as a Strategic Port. There are five military bases strategically located in Alaska (Elmendorf AFB, Ft. Richardson, Eielson AFB, Ft. Waignright, and Ft. Greely), and the Port is essential in serving the thousands of Army and Air Force personnel, that call Alaska home. Alaska is playing a larger role in the training of military personnel with more than 2 million acres of training grounds, where troops can train with close air support in live fire exercises. Without the Port of Anchorage, these key military bases would be out of business. (April 28, 2009)

As part of its designation as a Strategic Seaport, the Port of Anchorage must be able to provide enough dock space and acreage to support a military deployment within 72 hours notice. Currently, the Port has successfully demonstrated the ability to provide one 1,000-foot berth without ceasing normal commercial dock operations, and 25 acres of non-contiguous/non-adjacent staging, however this does not meet the military's stated needs.

"To Be" Military Support

The U.S. Transportation Command's Surface Deployment and Distribution Command, through the U.S. Maritime Administration, has indicated a new need for the Port to be able to provide 2,000 feet of berthing space with an adjacent 25 acres of staging area in support of a more expedited major unit deployment[32]. Upon completion of the expansion project, two

[31] Personal Interview, Alaska Basic Industries, October, 2010.
[32] US Department of Administration, Maritime Administration, *Port Planning Order*. (August 31, 2010)

1,000-foot berths and 25 acres of adjacent contiguous staging area can easily be provided with room for growth if needed. This future footprint further provides an easily secured and monitored area decreasing security costs for military users.

The gravel fill for the expansion project, 11 million cubic yards, will all be mined on Elmendorf Air Force Base and transported down a haul road to the Port. This arrangement has proved mutually beneficial to both parties. The Port benefits because the short transit distance generates a large cost savings for the project while the Air Force benefits as hills are removed at the end of the north-south runway creating land that can be developed and used as needed. Once the project is complete, the road that is currently used to transport gravel will be used for deployment, providing the military with direct access to a secured facility and avoiding the associated congestion on public roadways.

Interruption of Service

The efficiencies of the Port have significant advantages, but only so long as port operations remain uninterrupted. During the course of our surveys, businesses were asked how quickly their operations would be affected if operations at the Port were disrupted. Most businesses said they would feel the consequences within a week, two weeks at most. Beyond that time period, they indicated that the interruption would develop into a full blown crisis[33]. This highlights the seriousness of concerns about the stability of the current deteriorated Port structure in the event of a major earthquake.

Once completed the expanded facilities would significantly decrease this risk. The facilities are designed to withstand normal to moderate earthquakes with little to no damage. Given the past seismic history of the region, the design includes two berths designated as "essential facilities." These berths feature increased structural reinforcements and are designed to remain operational following a maximum level earthquake of equal or greater magnitude than the 1964 earthquake.

Manufacturing and Increased Backhaul Opportunities

The Port's newly added acreage can provide much needed industrial space for the manufacture of modules for the North Slope or for the construction of the Alaska gas pipeline. Potential developers of the gas line have already visited the Port to explore these opportunities. A recent report by Anchorage Economic Development Corporation (AEDC) indicates that industrial development lands in Anchorage that are suited for development are limited and dispersed.[34] The new uplands at the Port can help provide space for industrial development and staging.

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[33] See list of retail businesses interviewed in reference section

[34] Anchorage Economic Development Corporation, *Industrial Land Needs – The Outlook for Anchorage 2010-2030.* (2009)

Nearly 90 percent of the backhauled containers from the POA are empty. This is a potential area for increased economic activity that would have an additional benefit of reducing the cost of shipping. Although this has yet to be realized, value added processing of natural gas liquids from an Alaskan gas line could provide manufactured products for export. For example, ethylene processed into polyethylene beads, and butane processed into butyl rubber cants is the feedstock for plastic products such as automobile tires.[35]

POTENTIAL COST INCREASE DRIVERS

As previously mentioned, the efficiency of the existing distribution system is quite impressive. So much so that there is a large portion of the state's population that gives no real thought as to how things get on the store shelves. It is the efficiency of this transportation system that has contributed significantly to the ability to stabilize consumer prices for Alaskans. That being said, the balance is delicate. Here are a few potential sources of cost increases that, if realized, could easily upset that balance.

EPA Emissions Control Area

The requirements of this mandate, which are slated to take effect in 2015, would force Alaska-bound ship operators to use ultra-low sulfur diesel fuel in and near the Alaska coast. This fuel is much more expensive and safety concerns have been raised related to the low lubricating characteristics of this fuel. Once in effect, this could dramatically increase the cost of providing service to Alaska.[36]

Changes in Bypass Mail System

Reductions in the bypass mail system would have devastating effects on rural Alaska resulting in increased air shipping costs to rural villages by up to 500 percent. The recent proposal by U.S. Senator John McCain to eliminate the Essential Air Service program could increase the cost of air transportation including the transportation of consumer goods and other items to rural areas.

Proposed Container Tax

The states of Washington and California have both proposed container taxes to provide funds for transportation projects in their states. Alaska would be particularly and unfairly burdened with these fees since the bulk of our cargo arrives by container. The State of Alaska and the Alaska transportation industry rose up to vigorously oppose these measures and they were defeated. However, this issue may surface again and if adopted would significantly increase the cost of shipping goods to Alaska.

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[35] Chemical Manufacturers of America, Inc, *2010 Update: Cook Inlet Value Added Opportunity, for AEDA and ANGDA.*

[36] Personal Interviews, Horizon Lines, Totem Ocean Trailer Express, November, 2010.

Port Expansion Financing Plan

The Port of Anchorage secures funds for its intermodal expansion project from the federal government, the State of Alaska, and through contributions from its own annual profits. If the Port were required to bond completely for this project, to make the required payments towards those bonds would require substantial increases in port surcharge fees, from 3 to 8 times higher than current rates[37]. This would increase the cost of every single item, bulk or containerized, that passes through the POA. State and federal grants for the project negate the need to consider this option.

CONCLUSION

A modern, safe, survivable Port of Anchorage is critical to the lives of Alaskans. It is an economic driver that provides the needed commodities and business supplies Alaskans use in their everyday lives. It provides essential supplies to Alaska's construction and resource development industries and delivers the cars we use to get around in. The Port also provides jobs for Alaskans both through its direct operations and through the extensive web of transporters and facilitators that ultimately deliver the goods to Alaskans. It truly is the Port of Alaska.

[37] Based on tax-exempt bonding for capital costs of $300 to $750 million.

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ADDITIONAL BUISNESS CONTACTED

Barrow
A & D Automotive & Jeep
Aamodt Construction Inc.
Arctic Coast Trading Post
Arctic Janitorial Service
Arctic Pizza
Astac Cellular
Barrow Quick Stop
Barrow Souvenirs & Gifts (Phillips Child Care)
Barrow Utilities & Electric (Bueci)
Boynton Office Systems
Borealis Glass Design
Browers Restaurant
Cornerstone community church
Ferreras Equipment, LLC.
Inupiat Cleaners/ Furshop/ Water service
King Eider Inn
Lucy's Fabric Shop
Napa Auto Parts (Eskimos Inc. Fuel and Parts)
North Slope Borough Vet Clinic
Northern Lights Restaurant
Osaka's Restaurant
Pepe's North of the Border
Sam & Lee's Restaurant
Top of the World Hotel

Mountain Village
Mt. Village Covenant Church

Saint Mary's
Mattys Truck Rental LLC.

Nome
Airport Pizza
Anchor Liquor
Arctic Trading Post
Aurora Inn
Breakers Bar
Builders Industrial Supply
Eds/Xerox Corp
Kawerak Inc.
Landons
Mai's Guest House
Mukluk Telephone Co.
N B Tweet & Sons
Nome Liquor Store
Nome Machine Works
Nome Outfitters Gun & Tackle
Outsiders Hardware
Our Saviors Lutheran Church
Quality Auto Parts
R J's Auto Repair
Rasmussen's Music Art
Rave'n Cuts
River of Life Assembly of God
Solid Green Bingo & Pull Tabs
Subway
Trails End
Veggo Alaska

Kotzebue
Arctic Chiropractic
Arctic Sun Pull Tabs/Kvfd
Baker Services
Baker Aviation Inc.
Custom Electronics
Empress Chinese Restaurant
First Baptist Church
Iva Baker
Thomas Bolen (Otter Enterprises)

Dillingham
Alaskan Espresso
B & B Bed & Breakfast
B & C Fiberglass Inc.
Beaver Creek Bed & Breakfast
Bristol Express
D & J Rentals
Dan's Raft & Camping Equipment
Dave Williams Aircraft Repair
Dillingham Liquor Store
Firewood Bed & Breakfast
Food Bank
JD B&B Reservations
Kae Williams Aircraft Repair
Kozy Kuspuk (Bush Outfitters)
Marx Merchandise
N & N Market Inc.
Nushagak Cab Co.
Osborn Tanks
Rae's Flower & Garden
Ram Auto & Equipment Repair
Sherry's Cuts & Curls
Southwest Salvage
Stelling Enterprises (Gas Stations)
Teddy's Convenient Store
U Pop em' Fireworks

Unalakleet
Essential Services (Plumbing & Heating)
Sleep Inn
Unalakleet City Clerk
Unalakleet Native Village-Housing

APPENDIX A:

List of over 250 Alaskan Communities served by the Port of Anchorage

Adak
Akiak
Akiachak
Akutan
Alakanuk
Allakaket
Ambler
Anaktuvuk Pass
Anchorage
Anchor Point
Anderson
Aniak
Anvik
Arctic Village
Atka
Atqasuk

Barrow
Beaver
Bethel
Bettles Field
Big Lake
Border
Boundary
Brevig Mission
Buckland
Butte

Candle
Cantwell
Central
Chalkyitsik
Chandalar
Chatanika
Chena Hot Springs
Chenega Bay
Chenik
Chevak
Chicken
Chikaloon
Chignik
Chiniak
Chitina
Chugiak
Circle
Circle Hot Springs
Clam Gulch
Clarks Point
Clear
Cold Bay
Coldfoot
Cooper Landing
Copper Center
Crooked Creek

Deadhorse
Deering
Deltana
Delta Junction
Diomede
Dillingham
Dot Lake
Dutch Harbor

Eagle
Eagle River
Eek
Egegik
Ekwok
Elim
Emmonak
English Bay
Eureka

Fairbanks
False Pass
Flat
Fort Glenn
Fort Greely
Fort Yukon
Fortuna Ledge
Fox

Gakona
Galena
Gambell
Girdwood
Glenallen
Golovin
Gordon
Grayling
Gulkana

Hamilton
Healy
Holy Cross
Homer
Hooper Bay
Hope
Houston
Hughes
Hulsia

Icy Bay
Iditarod
Iguigig
Ikatan
Iliamna
Indian
Ivanoff Bay

Kaktovik
Kaltag
Kanatak
Kanishna
Karluk
Kasigluk
Kasilof
Katalla
Kenai
Kenny Cove
Kiana
King Cove
King Salmon
Kipnuk
Kivalina
Kobuk
Kodiak
Kokhanok
Koliganek
Kongiganak
Kotlik
Kotzebue
Koyuk
Koyukuk
Kustatan
Kwethluk
Kwigillingok
Kwikpak

Lake Minchumina
Larsen Bay
Lavelock
Livengood
Long Lower Kalskag

Manly Hot Springs
Manokotak
Marshall
McCarthy
McGrath
Medra
Mekoryuk
Mentasta
Minto
Moose Pass
Mountain Village

Nabesna
Naknek
Napakiak
Nelson Lagoon
Nenana
New Stuyahok
Newhalen
Newtok
Nightmute
Nikiski
Nikolai
Nikolski
Ninilchik
Noatak
Nome
Nondalton
Noorvik
Northway
North Pole
Noyes Island
Nuiqsut
Nulato
Nunapitchuk
Nyac

Old Harbor
Ophir
Ouizinkie

Palmer
Paxson
Pedro Bay
Perryville
Petersville
Pile Bay
Pilot Point
Pilot Station
Platinum
Point Hope
Point Lay
Poorman
Port Alice
Port Alsworth
Port Graham
Port Heiden
Port Moller
Portage Creek
Prudhoe Bay

Quinhagak

Russian Mission
Rampart
Red Devil
Ruby

St. George Island
St. Marys
St. Michael
St. Paul Island
Salcha
Sand Point
Savoonga
Scammon Bay
Selawik
Seldovia
Seward
Shageluk
Shaktoolik
Sheldon Point
Shemya
Shishmaref
Shungnak
Skwentna
Slana
Slaterville
Sleetmute
Soldotna
South Naknek
Stebbins
Sterling
Stevens Village
Stony River
Sutton

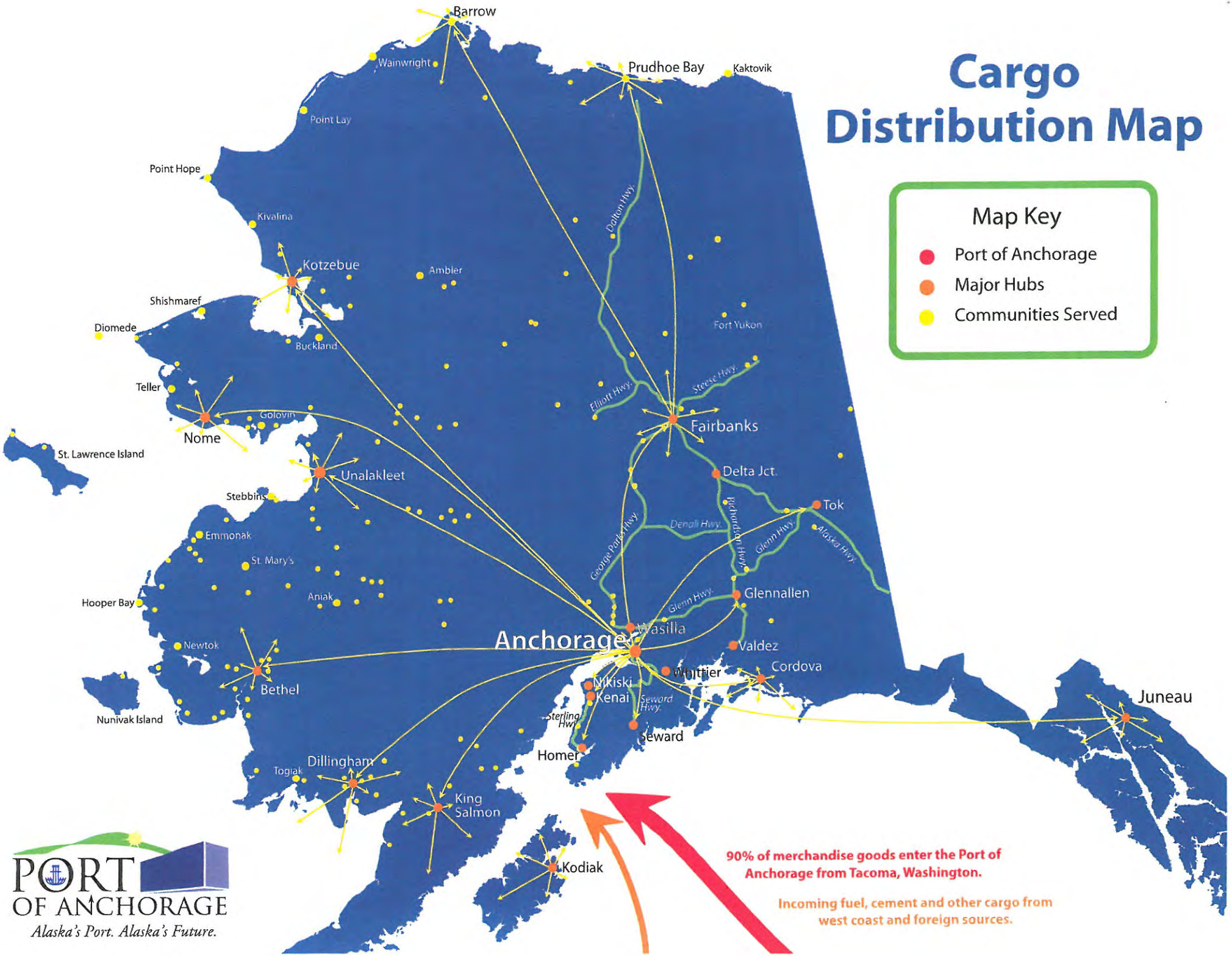
Takotna
Talkeetna
Tanacross
Tanana
Tatitlek
Teller
Tetlin
Tofty
Togiak
Tok
Toklat
Toksook Bay
Tonsina
Trapper Creek
Tuluksak
Tuntutuliak
Tununak
Twin Hills
Tyonek

Uganik
Umiat
Unalakleet
Unalaska
Unimak
Upper Kalskag

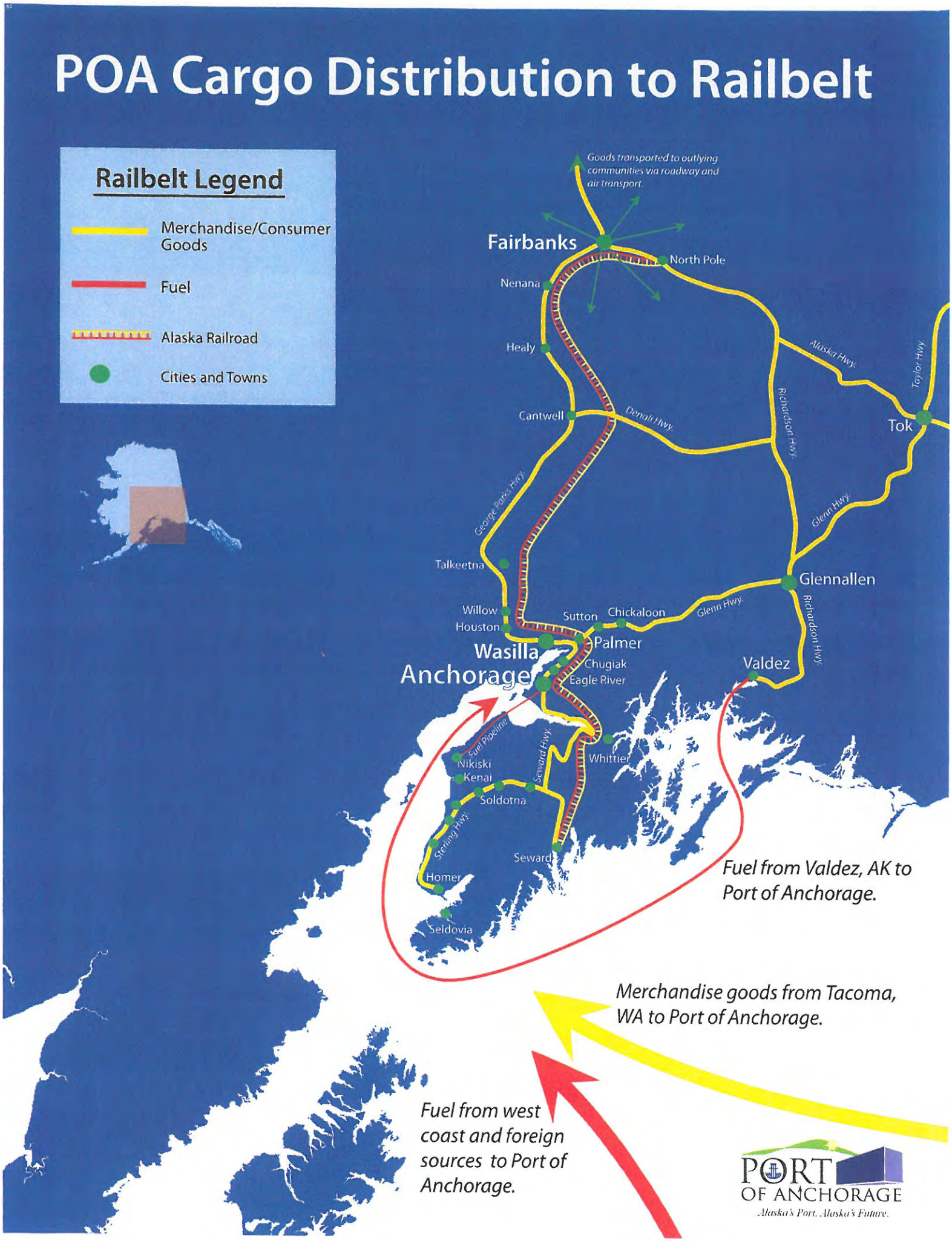
Valdez
Venetie

Wainwright
Wales
Wasilla
White Mountain
Whittier
Willow

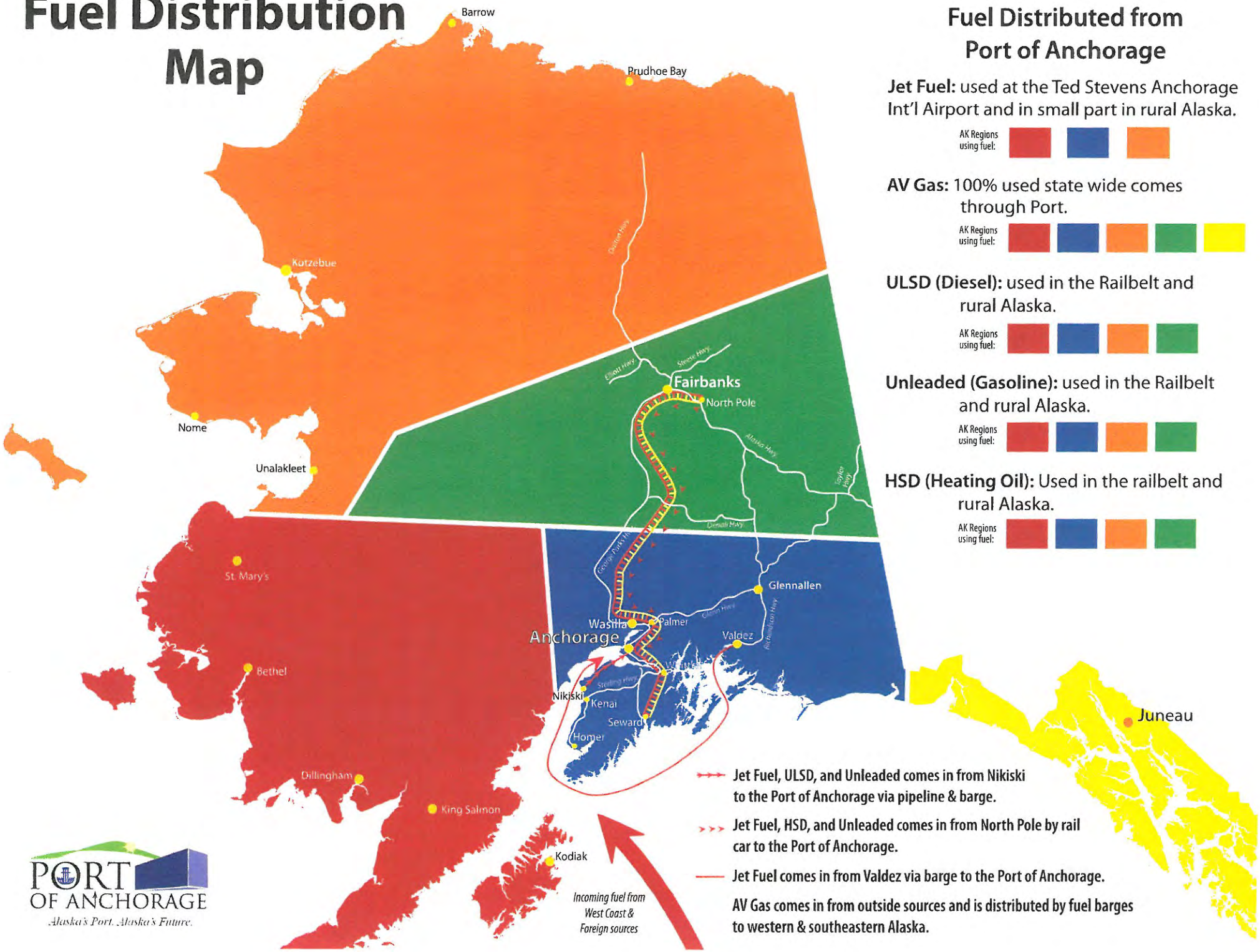
Cargo Distribution Map



POA Cargo Distribution to Railbelt



Fuel Distribution Map



Fuel Distributed from Port of Anchorage

Jet Fuel: used at the Ted Stevens Anchorage Int'l Airport and in small part in rural Alaska.

AK Regions using fuel:

AV Gas: 100% used state wide comes through Port.

AK Regions using fuel:

ULSD (Diesel): used in the Railbelt and rural Alaska.

AK Regions using fuel:

Unleaded (Gasoline): used in the Railbelt and rural Alaska.

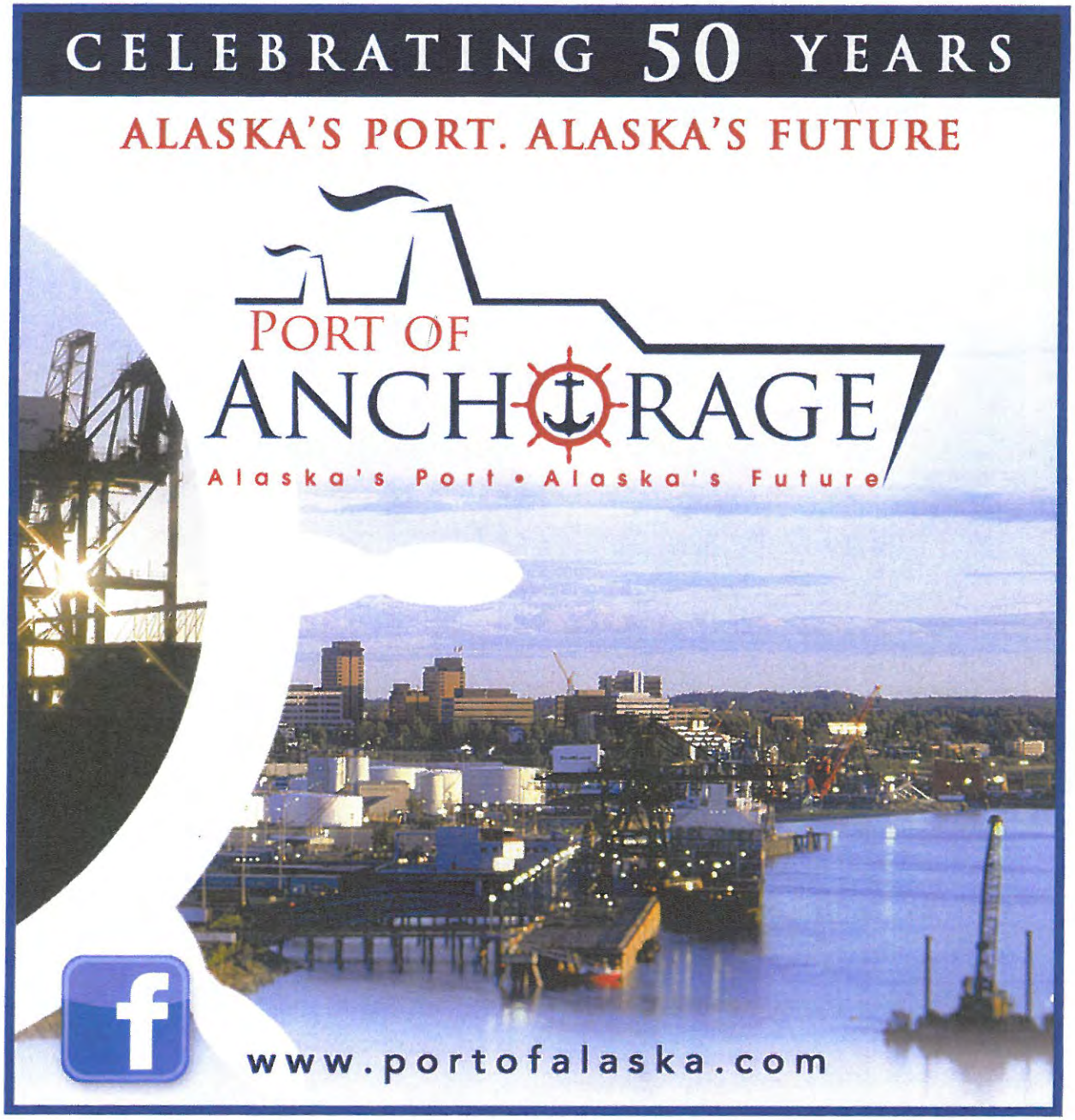
AK Regions using fuel:

HSD (Heating Oil): Used in the railbelt and rural Alaska.

AK Regions using fuel:

PORT OF ANCHORAGE
Alaska's Port. Alaska's Future.

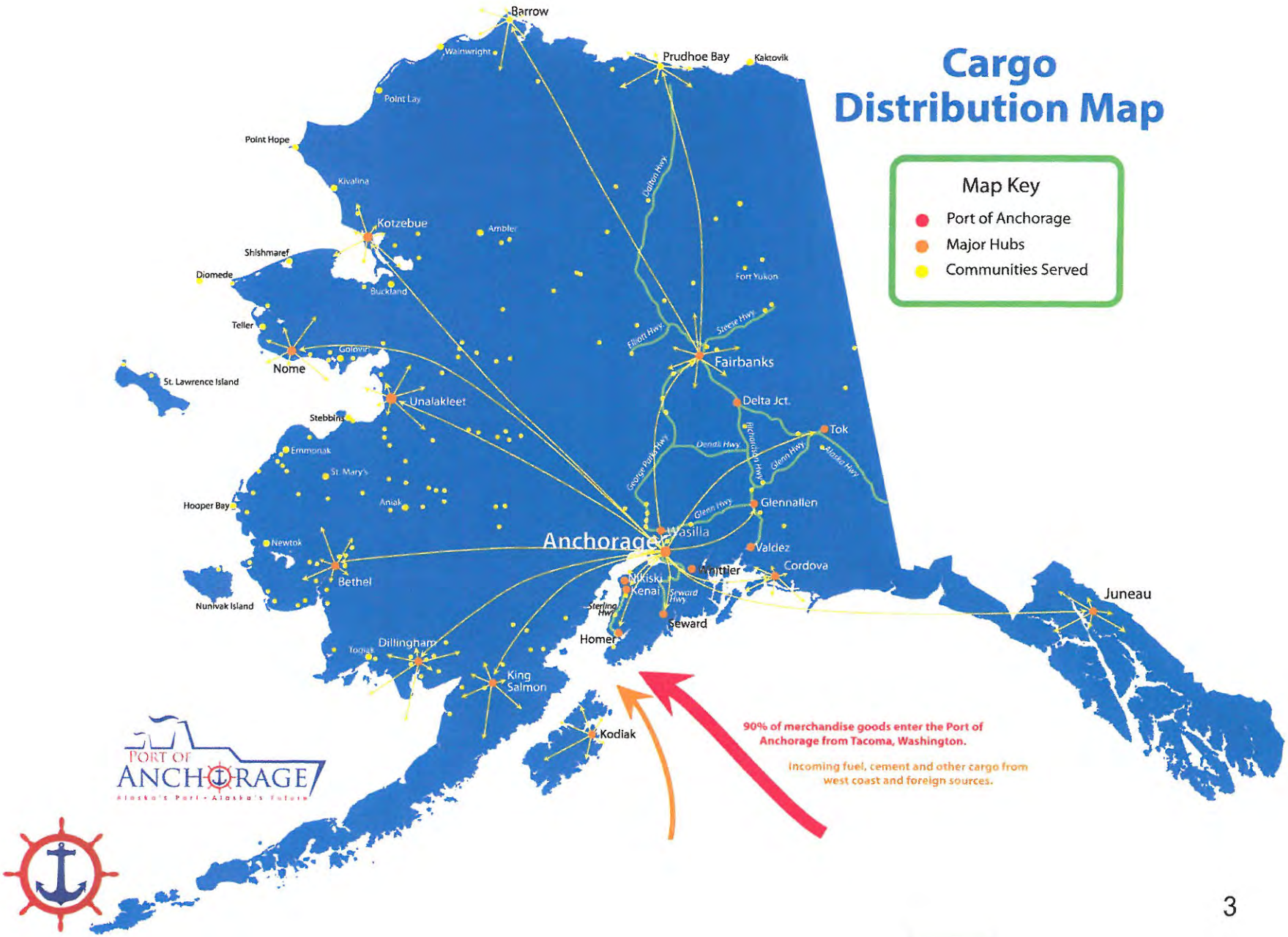
Emily Cotter – Gov Affairs



Facts about the Port

- The major point of entry for containerized cargo in Alaska
- Services support over 200 rural communities in the State
- Annually, 240,000 containers move through the Port
- Since 2000, an average 4 million tons of goods and materials pass through the Port's facilities annually
- 90% of merchandise goods for the Railbelt and interior Alaska.\
- 100 million pounds of bypass mail items
- 52,000 vehicles processed annually on average
- 80% of the cement for concrete

Cargo Distribution Map



Fuel Services & Military Support

Fuel Services:

- 11 million barrels of fuel annually
- 2/3 of the jet fuel for Ted Stevens Anchorage International Airport
- 100% of the jet fuel for Joint Base Elmendorf-Richardson
- 2/3 of all fuel used by the military in Alaska
- 1.4 million barrels of fuel are shipped from POA to rural Alaska

Military Support

- Designated a Department of Defense National Strategic Seaport
- One of only 19 ports in the nation to have this designation
- Supported over 30 deployments since 2005, including Stryker Brigade deployments to Iraq and Afghanistan

Employment & Payroll

- Regular Operations:
- $50 million aggregate annual payroll from Port Stakeholders
- Ship days over 3,600 vehicles moving through port
- Non-ship days over 600 vehicles

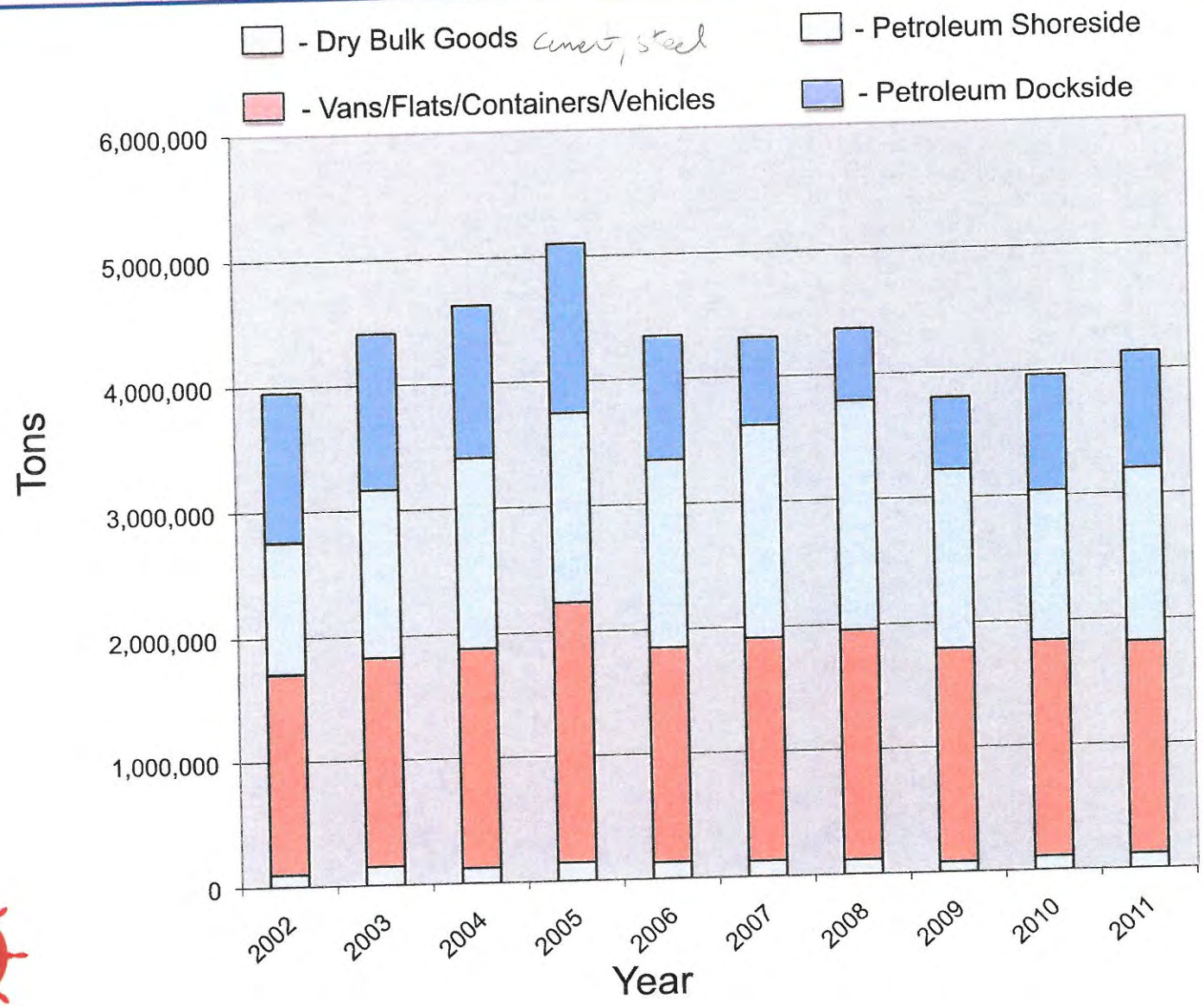
- Expansion Project:
- Directly employs 150-200 tradesmen & women annually
- Over 200 companies involved in project from 2005 - 2009

Port Stakeholders

A "stakeholder" is a company that relies regularly on the Port facilities to conduct routine business and/or leases port property.

- Horizon Lines
- Totem Ocean Trailer Express (TOTE) } Container Shippers
- Alaska Basic Industries (ABI)
- Tesoro Alaska
- Crowley Marine Services
- Aircraft Service International Group (ASIG)
- Flint Hills Resources
- Alaska Railroad Corporation
- U.S. Army – Alaska and U.S. Transportation Command's Surface Deployment & Distribution Command (SDDC)
- Cook Inlet Tug and Barge

Annual Dock Tonnage



Revenue & Operating Projections

(in Millions)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Revenue	$12.3	$13.6	$15.4	$15.5	$16.5	$16.8	$16.9	$17.3	$17.4	$17.8	$18.9
Expenses	$11.1	$12.0	$12.0	$14.3	$14.5	$14.4	$14.6	$14.7	$14.8	$15.6	$15.9
Projected Net Income	$1.2	$1.6	$3.3	$1.1	$2.0	$2.4	$2.4	$2.7	$2.6	$2.2	$3.0
Plus Depreciation	$4.3	$4.7	$4.7	$7.0	$7.1	$7.2	$7.3	$7.3	$7.4	$7.5	$7.6
Projected Cash Flow	**$5.5**	**$6.3**	**$8.1**	**$8.1**	**$9.2**	**$9.6**	**$9.6**	**$10.0**	**$10.0**	**$9.7**	**$10.6**

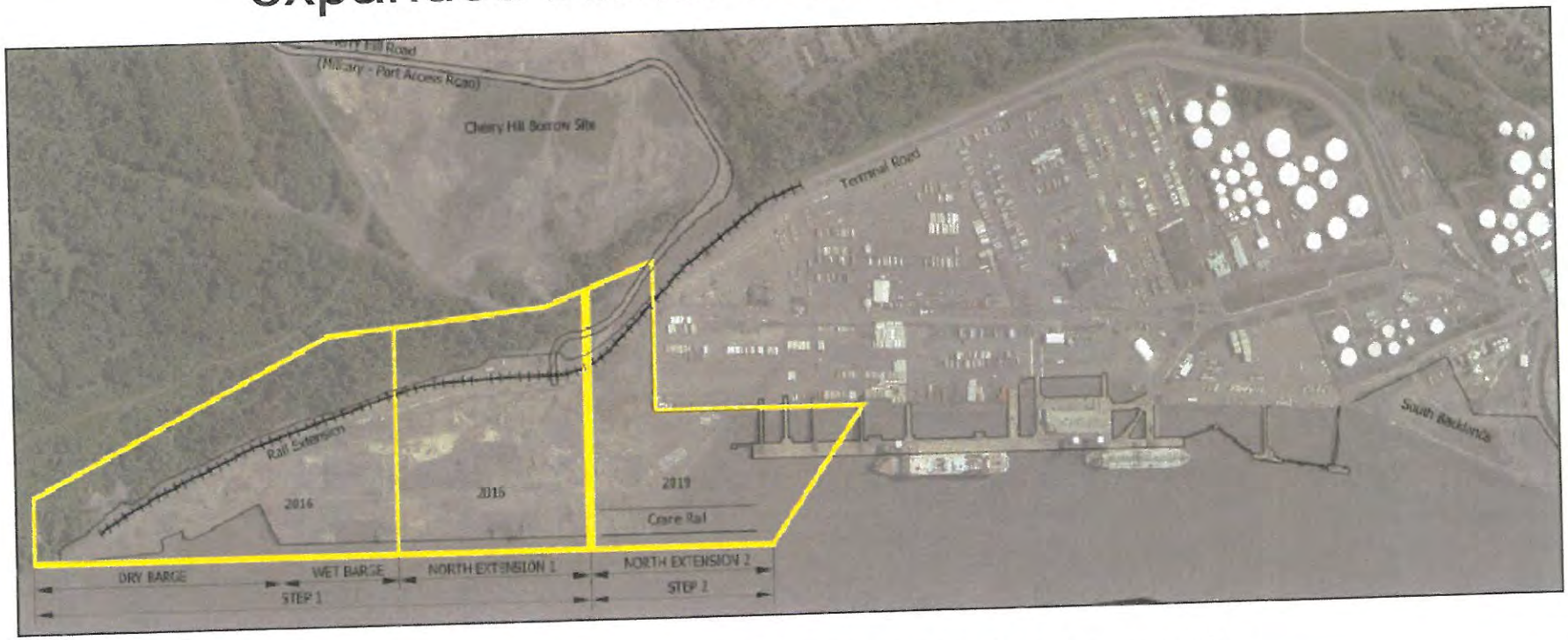
The expenses and revenue projections include projected maintenance costs for the newly constructed areas.

NOTE: The Port of Anchorage covers all of its own operational costs and reserves its profits for the project.

The Port is 50 years old and in a deteriorated condition.

The Port requires costly annual repairs, and is vulnerable to failure during a high magnitude earthquake.

The Project will replace the current container facilities while providing modern, reliable and expanded infrastructure for our future.



- 2 new ship berths
- 2 new barge berths
- Ability to accommodate larger ships
- Improved seismic capacity
- Secure access to JBER
- 65 acres of land for commercial/industrial use

Expanded Opportunities

Recent Customers

BP & ExxonMobile – Drill Pipe for the North Slope Operations
U.S. Army - Alaska - Military Deployments
Chugach Electric – Sub-station infrastructure
Film Productions – Big Miracle
Holland America – 7 to 9 summer port calls

New Customers

Tetrotech – CIRI Fire Island Wind Farm turbines & construction equipment
A Refined Petroleum Storage Facility/Barge Operator
A Container Barge Operator
Alaska Basic Industries – Planned storage expansion
USS Anchorage – Commissioning ceremony

Future Possibilities

Current Petroleum Tenant – Addition of a new product line
Film Productions
Resource development projects – Gasline, dam, etc.

Fee in lieu of taxes to MOA
500 to 700K per year

Funding

The project has been funded through a combination of port, state and federal funds.

$331 million received to date:

Federal Funds	$138.7 million
State Funds	$ 121.3 million
Port of Anchorage Funds	$ 71.0 million

- The Port also qualifies for a $75 million line of credit and is currently allowed to draw up to $51 million. Currently it has drawn $40 million of this credit line.
- The Port has also put $31 million towards the project from savings and revenues since 2001.

State Funds Received

Year	Amount	Bill
2002	$5,853,658	SB 29
2004	$436,505	SB 283
2005	$10,000,000	SB 46
2006	$10,000,000	SB 231
2008	$15,000,000	SB 221
2008	$10,000,000	SB 221
2009	$10,000,000	SB 75
2009	$10,000,000	SB 75
2010	$20,000,000	SB 230
2011	$30,000,000	SB 46
Total	$121,290,163	

Federal Funds Received

FY	DoD	FHWA	FTA	SDDC
2002	-	$9,568,421	$2,832,968	
2003	$4,850,000	$590,500	$2,862,505	
2004	$4,850,000	$1,371,058	$5,181,803	
2005	$4,850,000 $7,153,750	$4,149,039 $580,545	-	
2006	$8,245,000	$4,179,613 $1,169,645	$5,577,500	
2007	$9,700,000	$1,562,916 $4,467,940	$5,820,000	$1,957
2008	$10,804,618	$1,568,490 $4,483,847	$6,305,000	
2009	$10,000,000	$2,463,192 $6,466,443	$6,547,500	
2010	-	-	$472,390	
Total:	**$60,453,368**	**$42,621,649**	**$35,599,666**	**$1,957**
Total Federal Funds: $138,676,640				

Funds Expended on Project

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	**Total**
(Millions)	-	$6.6	$18.3	$19.6	$10.5	$43.7	$63.3	$63.4	$39.6	$36.5	$301.5

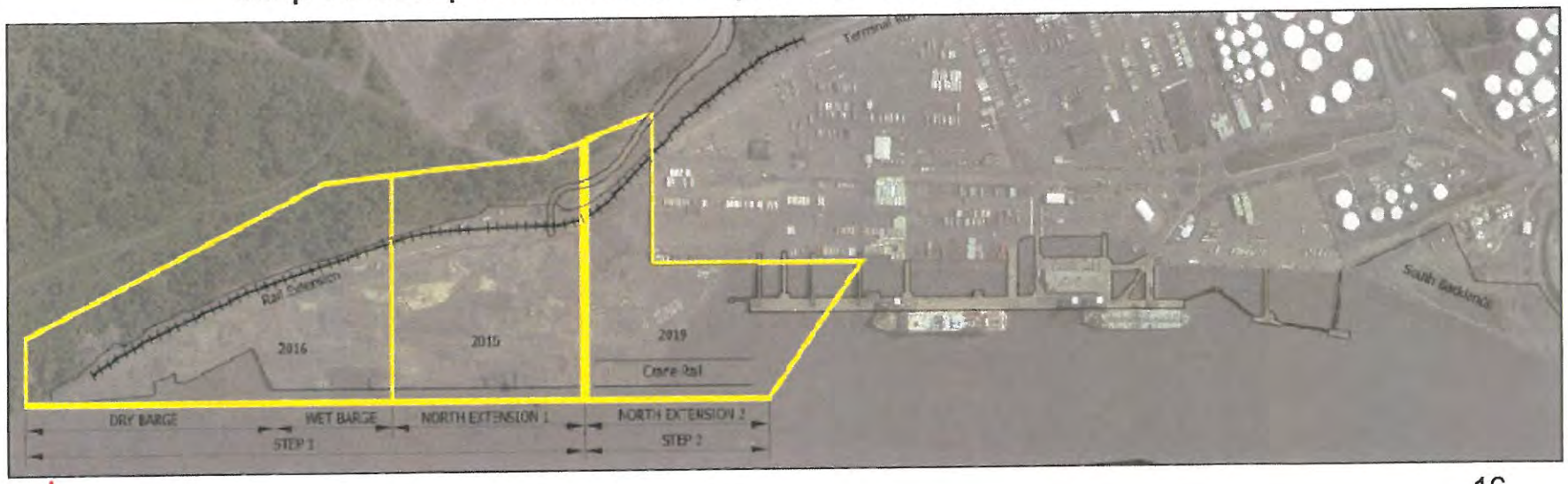
- Baseline site assessment, scientific studies, permitting & environmental impact assessments
- Instituted environmental impact avoidance, minimization, and/or mitigation measures
- Over-water Geotechnical Program:
  -sampling, analyses, seismicity studies, design enhancements, and optimized dredging specs
- Hydrologic & hydraulic modeling for harbor sedimentation and icing studies
- Geotechnical Analysis: Borings, Analysis, Design Changes
- Extracted, tested, sorted, transported and placed structural fill to create 65 acres of useable new land
- Completed dry barge berth with limited operational capacity
- Constructed 5 mile haul connecting POA to Joint Base Elmendorf Richardson (JBER) allowing secured military deployment, an emergency evacuation route and off-road gravel transport.
  -This road is already being used for military deployments, relieving congestion on public roadways.
- Cleared land, opened and operated two gravel extraction borrow pits on JBER
- Realigned Terminal and Tidewater roads with enhanced intersections, track & fuel line crossings, & safety upgrades
- Demolished unserviceable track and installed upgraded, extended track with tie-in to the ARRC rail line
- Installed a new dedicated ultra-low sulfur diesel line
- Manufactured and installed a customized floating dock for the Coast Guard for Emergency Response
- Buried, upgraded and extended power lines and critical drainage systems
- Completed sheet pile inspections establishing the integrity of the structure

Funding

State Funding Needed: $350 million
This funding is based on the February, 2011 ICRC cost estimate to complete two barge berths and two ship berths in the northern project area.

The construction will be completed in two steps so as not to interrupt our commercial shippers.

Step 1: complete two barge berths and northern ship berth
Step 2: compete second ship berth with crane rails



Project History

1999 The Port's 10-year Master Plan recommends an expansion program to meet future needs.

2003 The Port partners with the U.S. Maritime Administration (MARAD) to implement the program.

2005 The preferred alternative is selected (current project design) and the permitting process begins.

2006 Terminal Road Rail Extension and Coast Guard floating dock completed.

2007 The project receives final permits.

2008 North and South Backlands filled and Port/Tidewater Rd. improvements completed. Bulkhead construction in the northern phase begins.

2009 Dry Barge Berth bulkhead and mooring complete. Bulkhead construction continues. The port is made aware of problems in the spring of 2009.

2010 Bulkhead construction halted when the extent of the damage was revealed.

2011 Work focused on completing sheet pile inspections to establish the integrity of the structure.

Old Paradigm

Federal Lead Agency

MARAD

US DOT Maritime Administration

•Contracting & procurement authority, oversight and quality assurance and management of project funds.

Project Owner

Port of Anchorage

Municipality of Anchorage

• Securing funding and coordinating the construction phasing to fit the port's needs.

Project Manager

ICRC

Integrated Concepts & Research Corp.

• Project development & management, design, construction and permitting activities.

Design & Construction Subcontractors

New Paradigm

Old Paradigm Problems:

- No direct authority over project contractors by Port/Muni.
- No on-site MARAD representative at Port.
- No direct liability or bonding protection for Port/Muni.
- No Port directed construction oversight authority.

New Paradigm Solutions:

- New agreement establishing oversight committee.
- On-site MARAD representative.
- A performance bond has been established for Port/Muni.
- On-site construction observers reporting directly to Port.
- Direct involvement in quality control & assurance program and monitoring.
- Established a technical review committee.

Enacted Solutions

In September, 2011, the Municipality of Anchorage signed a new Memorandum of Agreement with MARAD. The new agreement provides increased accountability from all parties and ensures local control of the project moving forward.

The 2011 agreement:

- Formalized the Project Oversight and Management Organization giving the Port & Muni a decision making role in all aspects of the project.
- Ensures that MARAD will place a full-time representative at the Port.
- Increases liability and performance bond coverage for the Muni
- **Transfers all contracting and procurement responsibilities from MARAD to the Muni or their designee by May 31, 2012.**

Establishing Control

Additional measures have been taken to ensure the success and accountability of future construction.

- The U.S. Army Corps of Engineers is conducting an independent design review and an analysis of the work completed to date.
- The U.S. Department of Transportation's Office of the Inspector General is conducting an audit of MARAD's contracting and procurement methods in its port development program using the Port of Anchorage as a case study.
- MARAD has engaged AECOM, a nationally known company, to conduct a "root cause" analysis of work performed prior to 2010.

For more information please review the quarterly reports we have submitted to the legislature. They are available on our website at www.portofalaska.com

Website:
www.portofalaska.com

Facebook:
www.facebook.com/portofalaska

Galvanized open cell sheet pile
w/ cathodic protection → 100 year life

Alaska's Lifeline

Cargo Distribution Patterns from the Port of Anchorage to Southcentral, Northern, Western and Southeast Alaska

PORT OF ANCHORAGE

Alaska's Port • Alaska's Future

University of Alaska Anchorage
College of Business & Public Policy
Department of Logistics
and
Port of Anchorage
Municipality of Anchorage

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EXECUTIVE SUMMARY
PORT OF ANCHORAGE CARGO DISTRIBUTION STUDY

The sources for the data in this executive summary are extensively referenced in the body of this study.

Goods shipped through the Port of Anchorage (POA) reach almost every Alaska community making the POA arguably one of the most important infrastructure facilities in the State of Alaska. The data presented in this report shows the entry points and distribution channels of critical cargoes that drive Alaska's economy and bring Alaskans the consumer goods and business supplies essential to the state's economy and daily life.

For the vast majority of Alaskans, the Port of Anchorage **is** Alaska's Port. The annual cargo entering the Port of Anchorage accounts for 90% of the merchandise goods used by Alaskan communities west of Cordova. This study will help inform public policy decision at the state and federal level to determine the level of public support that is justified for the Port expansion project.

Nearly all of the container goods that make up the day-to-day items used by Alaskans originate in shipments from the Port of Tacoma to the Port of Anchorage (POA). These shipments represent a critical lifeline for Alaska and amount to nearly 30 percent of Tacoma's total cargo activity. The total value of these goods is estimated to be well over $1 billion annually according to a study by the Port of Tacoma and the Seattle Chamber of Commerce.

Once these cargos enter Alaska through the Port of Anchorage, they are distributed throughout the Railbelt by truck, train, and to rural Alaska by air and barge. Ninety percent of the goods delivered to Fairbanks and the Mat-Su area originate in shipments through the Port of Anchorage as do seventy-five percent of the goods consumed in Western and Northern Alaska. A substantial amount of POA originated cargo is shipped via air freight to Southeast Alaska and 28.5 million pounds of US Postal Service Standard mail arrives in the state annually through the Port.

The POA is also a major entry point for fuel. On average, two-thirds of the fuel for air carriers at Ted Stevens Anchorage International Airport, and two-thirds of the fuel used by the US military and federal government agencies in Alaska, are delivered through the Port. This includes 100 percent of the jet fuel for Elmendorf Air Force Base and Fort Richardson- now Joint Base Elmendorf-Richardson (JBER). Smaller aircraft around the state are particularly dependent on Port operations because all in-state aviation gasoline (avgas) passes through the Port. Additionally 90 percent of the fuel Alaskans use to operate their vehicles and water craft originates in POA deliveries.

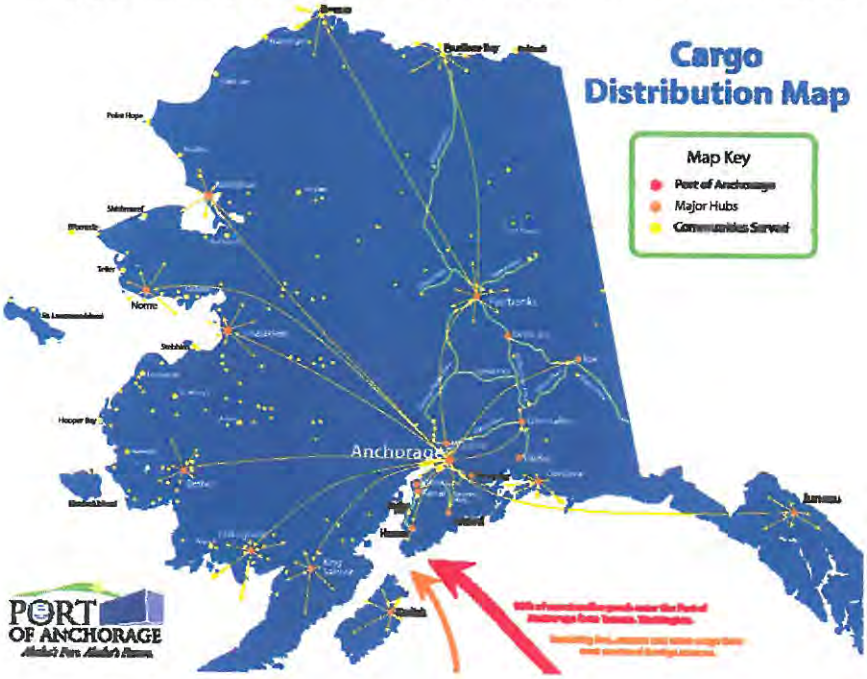
The Port of Anchorage is the only port in Southcentral that has the capability to offload bulk cement in unsacked powder form. As a result, over 80 percent of the cement used for concrete construction in the state comes into the Port annually, enough to build a four foot wide sidewalk from Homer to Barrow and back.

The Port is essential to the Armed Forces and was designated one of only 19 National Strategic Seaports by the Department of Defense. The US Armed Forces have staged over 20 military deployments through the Port of Anchorage in the past 10 years, including Stryker Brigade deployments to Iraq and Afghanistan. In a 2009 letter to the U.S. Secretary of Transportation, Raymond LaHood, U.S. Senator Daniel Inouye calls the Port of Anchorage "vital to our nation's defense" citing its service to all five military bases saying "the port is essential in serving the thousands of Army and Air Force personnel that call Alaska home." He continues on to say that "without the Port of Anchorage, these key military bases and activity would be out of business."

The Port of Anchorage makes a substantial contribution to Alaska's economy not only through the goods and cargoes which enter the port, but also through jobs and associated payroll. Total payroll at the Port for direct operations exceeds $53 million per year. An additional $20 million dollars per year in construction wages supports around 500 jobs and is expected to continue through 2021. The associated railroad, trucking and air cargo operations (delivering Port of Anchorage sourced goods at the regional air hubs of Fairbanks, Bethel, Nome, Dillingham, Kotzebue and Barrow) also make a significant contribution to many local economies.

Four container ships per week supply the vast majority of consumer goods and business supplies to Alaskans. In the course of this study we discovered that most retail companies, non-profits and government agencies reported that they would reach a crisis mode within two weeks if service was disrupted.

This study also identifies some of the issues that could substantially increase operating costs within the distribution system, and ultimately, the cost of goods to Alaska consumers. One example is increased fees and tariffs to pay for the Port of Anchorage Intermodal Expansion Project should local bonding be required. Federal issues include proposed changes to the bypass mail system, elimination or reduction of the Essential Air Service Program, new requirements for marine vessels to use ultra-low sulfur diesel, and any initiation of federal container taxes. Each of these issues could have a significant impact on the cost of goods to Alaskans.



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ABBREVIATIONS

AEDC – Anchorage Economic Development Corporation
ARRC – Alaska Railroad Corporation
ASIG – Aircraft Service International Group
AS&G – Anchorage Sand and Gravel
CIRI – Cook Inlet Region Incorporated
DLA – Defense Logistics Agency
DOD – Department of Defense
ECA – Emissions Control Area
Horizon – Horizon Lines, Inc.
IMPLAN – Impact M for Planning, a multiplier for economic impact calculation developed by the US Department of Agriculture Forest Service
ISER – Institute of Social and Economic Research, University of Alaska
JBER – Joint Base Elmendorf-Richardson
LO/LO – lift-on/lift-off operations
MLLW – Mean Lower Low Water
PANAMAX – The maximum sized vessel that will fit through the Panama Canal
POA – Port of Anchorage
POL – Petroleum Oils and Lubricants
RO/RO – roll-on/roll-off operations
TOTE – Totem Ocean Trailer Express
ULSD – Ultra-Low Sulfur Diesel
USCG – United States Cost Guard
USPS – U.S. Postal Service

STUDY PURPOSE AND METHODOLOGY

The purpose of this study is to describe the distribution patterns of goods which enter the Port of Anchorage (POA) and are delivered to Southcentral, Interior, Northern, Western and Southeast Alaska. The information from this study is intended to inform the general public and public policy makers on the importance of the Port's operations to Alaska's people and businesses.

The study methodology was to collect all available and relevant data on incoming volumes of cargo entering the Port of Anchorage utilizing published documents, port data and interviews with port operators. The final cargo destinations within Alaska and the patterns of freight distribution were further determined through interviews with freight forwarders, trucking, railroad and air freight operators along with retail and government related customers.

To better illustrate the patterns of freight distribution, the data was arranged according to the following tiers:

I. The first tier consists of shipping companies and operators who deliver cargo to the POA including containerized cargoes of consumer goods and business supplies, fuel, cement, construction materials, military equipment, building materials, automobiles and commercial vehicles.

II. The second tier is made up of trucking and rail operations which move goods from the POA to a secondary location. There they are either delivered directly to retail markets or consolidated and shipped via a third tier transporter to a further destination.

III. The third tier is comprised of air cargo carriers and barge operators who ship consolidated freight to hub airports and local harbors via bypass mail, air freight and barge operations. Once received at a hub airport or harbor, the freight is then further broken down for delivery by smaller air carriers or barge shippers for final delivery to rural villages.

IV. The fourth tier includes those goods delivered to the Port of Anchorage and then transshipped to Kodiak, Dutch Harbor and Western and Northern Alaska by container ship and barge. This includes consumer goods and business supplies, fuel, construction materials, automobiles and commercial vehicles.

Data on incoming fuel, cement and military supplies were also analyzed to determine their sources and patterns of distribution.

The Port is committed to treating any proprietary data in a confidential manner and informed study participants that such data would be aggregated to ensure confidentiality. As a result, much of the data is described in overall terms or percentages, nevertheless it clearly indicates the patterns of distribution.

The total payroll of Port stakeholders was collected from operators to help illustrate the economic impact of direct Port operations on Alaska's economy. This data was aggregated into a total payroll amount and was interpreted by Dr. Darren Prokop, UAA Professor of Logistics. The Alaska Trucking Association and the Alaska Association of Air Carriers provided additional information to help assess the value of trucking and air cargo operations to Alaska's economy.

In the course of interviewing participants in the distribution chain, issues of concern were raised that could affect the cost of delivery of goods throughout Alaska including the costs of developing the Port if local bonding were required, changes or reductions in the bypass mail system, requirements for marine vessels to use ultra-low sulfur diesel fuel, and any change in container taxes. These concerns are addressed at a cursory level towards the end of this study.

Participants also identified several inefficiencies in current Port operations that could be improved as a result of the new Port design. This information is contained in *Commodity Details and Port Efficiency Issues* on page 15.

Participants were asked to identify the impact on their businesses should there be any disruptions to Port of Anchorage operations. A summary of their responses is contained on page 18 under *Interruption of Service.*

This study was sent in draft form to all participants for review to identify any omissions or errors. A complete list of companies interviewed for this study can be found on page 25.

ABOUT THE AUTHORS

This study was conducted under the supervision of Dr. Darren Prokop, Professor of Logistics at the College of Business and Public Policy at the University of Alaska, Anchorage (UAA). Primary research for the project was conducted by Paul Fuhs under the supervision of the Port of Anchorage. The project was assisted by University of Alaska Anchorage student interns Duke Kahumoku (majoring in Political Science) and Grigory Kalugin (majoring in Logistics).

A NOTE FROM THE AUTHORS

The authors would like to thank all the companies who participated in this study. Their cooperation was freely given and their support is very much appreciated. Too often this sector of our economy is taken for granted as essential items appear each week on the shelves without any thought as to how they got there.

This study contains data and statistics, which when taken together, are quite remarkable. As different sectors of the industry were interviewed, it became apparent that behind the numbers there are very real Alaskans, all pulling their weight in a complex and sometimes dangerous system that requires each leg to work all the time, every time, in order to be successful. This silent, steady system is what keeps Alaska's economy alive, its what keeps food in the house and pencils on the desks. This study is a way of recognizing what these companies and people do for the citizens of Alaska every day.

BACKGROUND ON CURRENT PORT OPERATIONS AND PORT REDEVELOPMENT PLANS

The current Port facility has four ship berths and a published draft depth of -35 ft mean lower low water (MLLW) which easily accommodates ships requiring 30 feet of draft. The two northern berths are container ship berths used primarily by Horizon Lines and Totem Ocean Trailer Express (TOTE). A container ship from each of these companies travels from the Port of Tacoma to call on the POA twice a week on Tuesdays and Sundays. TOTE offloads their cargo via Roll-on/Roll-off (RO/RO) facilities while Horizon Lines uses three 38-foot gauge container cranes to lift containers on and off their ships. These container berths are also used to accommodate cruise ship vessels during summer months and other vessels as needed. The two berths on the south end of the dock are for bulk cargo (cement) and petroleum oil and lubricants (POL). These berths accommodate fuel tankers, fuel barges, and dry bulk carriers.

The Port occupies 129 acres with 81 acres leased to long-term users and 31 acres used as transit storage for cargo including fuel tanks and cements silos. These same areas are occasionally designated for use by the Department of Defense to stage military deployments. The Alaska based U.S. Coast Guard Maritime Safety and Security Team is home ported at the POA with 75 personnel and multiple emergency response vessels.

The POA is involved in a major project to replace aging and deteriorated facilities that were built up to 50 years ago and are at risk of catastrophic failure in the event of a major earthquake[1]. The Port of Anchorage Intermodal Expansion Project began in 2002 and upon completion will add 1,700 ft of linear dock space, creating 7 functioning ship berths, two public barge berths, and an additional 135 acres of land which can accommodate industrial development activities. The project increases the operating depth of the Port to -45' MLLW and is expected to reduce dredging costs. The expansion project must be constructed in phases with new operational sections completed before abandoning the current facilities to ensure that there is no disruption of service.

Several areas of the new facilities are constructed to withstand the worst case expected earthquakes based on past history of seismic activity. They are designed to operate for 50 years without any major maintenance and an overall useful life of 75 to 100 years. The expanded facilities will also address a number of inefficiencies inherent to the current facilities which are described in this report.

[1] R&M Consultants, Inc. *Seismic Vulnerability Report.* (2009).

The Port of Anchorage operates on a self-sustaining basis. Port tariffs and fees pay for all operations and maintenance of the facility, along with a small reserve fund. This steady fiscal performance qualifies the Port for a $75 million line of credit used as part of the Port's match to state and federal funds in the ongoing expansion project.

FINDINGS OF THE STUDY

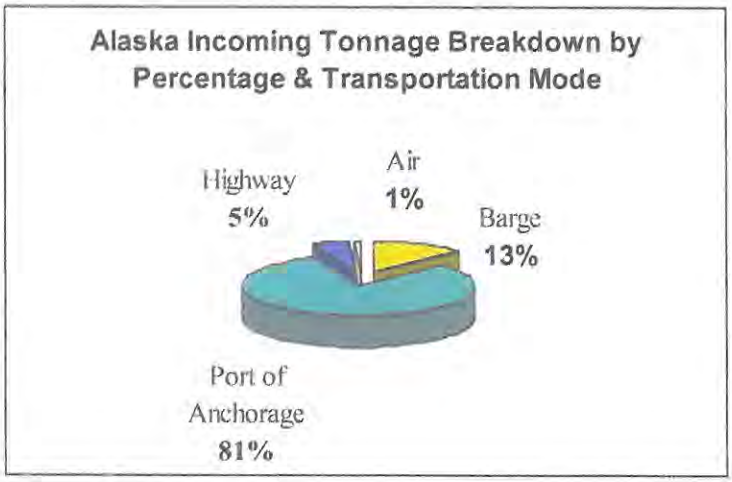
TIER I: ANNUAL INCOMING CARGO AND ORIGIN OF SOURCES

In 2009, the baseline year for complete data, the Port of Anchorage received 4,370,000 tons of cargo (8.74 billion pounds) comprised of containerized consumer goods and business supplies, US mail, fuel, construction materials, drill pipe, cement for concrete, automobiles, and military equipment.[2]

An additional 706,000 tons of annual cargo deliveries, most by barge, do not pass through the POA, but enter Southcentral Alaska through the Alaska Railroad Corporation's rail barge operations in Seward and Whittier and through barge deliveries to North Star Terminal and Stevedoring and the Swan Bay dock. These are primarily outsized and overweight loads and bulk construction supplies.[3] Around 325,000 tons of goods enter the Railbelt through trucking and airfreight.

Railbelt Alaska Incoming Tonnage Breakdown: Percentage by Facilities[4]

There are four ways of delivering goods to the Alaska Railbelt: container ship, barge, trucks, and air freight. Each delivery method is displayed by percentage in the following chart according to data from the Alaska Rail Road Corporation.



[2] Port of Anchorage, 2009 Annual Port Tonnage Report
[3] Personal Interview, September, 2010, Alaska Rail Road Corporation
[4] Personal Interview, September, 2010, Alaska Rail Road Corporation & 2009 Annual Port Tonnage Report

POA LO/LO and RO/RO Operations

Container crane lift on/lift off (LO/LO), and roll-on/roll-off (RO/RO) operations account for 1,820,000 tons annually, (120,000 incoming containers annually, or about 10,000 containers per month.)[5] TOTE's RO/RO operations also allow for the delivery of oversized loads, or just about anything that can be put on wheels.

POA container crane and RO/RO cargo is primarily comprised of consumer goods and business supplies, construction materials, and vehicles. This represents 90 percent of Railbelt and interior merchandise cargo and business supplies shipped to Fairbanks, Mat-Su and the Kenai Peninsula.[6] **Origin of Cargo:** Port of Tacoma

Non POA Barge Cargoes

Around 706,000 tons of annual cargo does not pass through the POA, but is instead transported by barge to Seward, Whittier, and private docks in Anchorage. These cargoes are mostly bulk but can also be containerized and are primarily materials such as chemicals, sack cement, grain products, construction goods, heavy industrial loads, oversized items and fuels. There are several different types of barges that use the facilities listed above including rail barges, with regular weekly service between Seattle or Price Rupert depending on the company, and fuel barges. **Origin of Cargo:** Seattle, Prince Rupert, BC

Fuel

Eleven million barrels[7] (or 462 million gallons) of refined petroleum products move through the Port of Anchorage annually on a regular basis including:

- Two-thirds of the jet fuel used at Ted Stevens Anchorage International Airport
- Two-thirds of all fuel used by military and federal agencies in Alaska
- 100 percent of the jet fuel used by Elmendorf Air Force Base
- 90 percent of the fuel used by vehicles, watercraft and general aviation aircraft in Railbelt Alaska
- 100 percent of the aviation gasoline used statewide (including Southeast Alaska)

Origin of Cargo: Flint Hills Refinery, Tesoro Refinery, Petrostar Refinery, domestic and international ships and vessels.

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[5] Port of Anchorage, 2008 Annual Tonnage Report
[6] 1999 VZM TranSystems Corp/Northern Economics, *Port Master Plan*, Page 1.C 14
[7] Port of Anchorage, Annual Dock Tonnage 2001 - 2010

Cement

An estimated eighty percent of the cement for manufacturing the concrete used in Anchorage, Fairbanks, Mat-Su, the Kenai Peninsula and the road system is delivered through the Port of Anchorage by the company Alaska Basic Industries, a division of Anchorage Sand and Gravel (AS&G).[8] Other barge operations deliver an additional 20,000 tons per year. In some cases, cement is distributed from the POA to rural areas via air freight from Ted Stevens Anchorage International Airport. To date, 78 Alaskan communities throughout the State, including the North Slope, have received cement through this distribution method.
Origin of Cargo: Korea, China, Thailand

Automobiles and Commercial Vehicles

About ninety-five percent of new private, commercial, and military automobiles and trucks bound for the Railbelt come through Port of Anchorage. On average, 50,000 vehicles pass through the POA annually.[9] **Origin of Cargo:** Port of Tacoma

Military Cargo

In addition to the fuel, military operating supplies and equipment, commissary groceries, and base/post exchange consumable and durable goods items provided through the Port of Anchorage. In a 2011 letter to Alaska's Congressional delegation, Lieutenant General Dana Atkins, Commander of Alaska Command wrote "The Port of Anchorage is not only the strategic hub for military deployments and operations, it is also one point of throughput for the commodities we stock in our base exchanges, commissaries and troop stores in support of 55,000 military and family members in Alaska."

In the past ten years the Port has supported over 20 military deployments, including deployments to Iraq and Afghanistan. Lieutenant General Atkins writes "Since 2005 almost 18,000 pieces of military cargo in the form of combat vehicles, weaponry, and support equipment have passed through the Port. Our ability to project this power to combat theaters around the globe depends heavily upon sealift through the Port of Anchorage."[10]

USPS Mail

Twenty-eight and a half (28.5) million pounds of US "standard mail" is delivered annually through the Port of Anchorage.[11] **Origin of Cargo:** Port of Tacoma

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[8] Personal Interview, Alaska Basic Industries, October, 2010.
[9] Phone Interview, Wrightway Auto Carriers, October, 2010.
[10] Letter from Lieutenant General Dana T. Atkins to the Alaska Delegation, February 9, 2011.
[11] Phone Interview, U.S. Postal Service, October, 2010.

Bulk Shipments and Construction Materials through POA

These include general construction materials, drill pipe for the North Slope and industrial structural elements. If Cook Inlet Region Incorporated (CIRI) moves forward with it planned wind energy project on Fire Island, the towers are expected to arrive in Cook Inlet by ship and be delivered to the POA for transfer by barge to Fire Island. This will be facilitated by the Port's dry barge landing facility.
Origin of Cargo: Seattle, Tacoma and International sources.

TIER II: PRIMARY DISTRIBUTION TO ANCHORAGE, INTERIOR AND RAILBELT ALASKA

Trucking operations make deliveries directly to large and small retail stores in the Anchorage bowl. Trucks also deliver containers to freight consolidators and warehouses in Anchorage who further break down the cargo for smaller deliveries.[12]

Nearly 90 percent of consumer goods and business supplies for Fairbanks, Mat-Su, and the Kenai Peninsula first enter through the Port of Anchorage. The goods are primarily transported as follows:

- 60 percent intermodal transfer to ARRC for rail transport
- 40 percent delivered by trucking operations[13]

Standard US mail shipped through the Port of Anchorage is delivered by truck to the USPS sort operation near the Ted Stevens Anchorage International Airport. After sorting, it is delivered locally by mail carriers and statewide by truck and air operations. Fuel and cement are delivered directly by truck and railcar to customers throughout the state while cement is also delivered to remote locations by air freight. Construction materials and automobiles are delivered directly by truck.

These trucking operations have a substantial impact on Alaska's economy. The American Transportation Research Institute reports that in 2008, 603 Alaska trucking companies provided 19,955 jobs.[14]

[12] Personal Interview, Alaska Trucking Association, November, 2010.
[13] Personal Interview, Alaska Rail Road Corporation, September, 2010.
[14] American Transportation Research Institute & Alaska Trucking Association, *Alaska Fast Fact.*, (2011)

TIER III: SECONDARY DISTRIBUTION OF CONSUMER GOODS AND BUSINESS SUPPLIES FROM THE PORT OF ANCHORAGE TO RURAL AND SOUTHEAST ALASKA

Surface and Air Transport of Goods

Goods designated for shipment to rural Alaska are transported primarily by trucks to distribution warehouses as stated under the second distribution tier. These warehouses and distribution centers consolidate the goods which are then further distributed to air freight and bypass mail carriers for transport to rural areas. The volume of consumer goods transported through this method is significant. According to a 2006 Northern Economics study, 75 percent of total goods move to rural Alaska through bypass mail.[15]

Air cargo and related passenger flight operations make a substantial contribution to Alaska's economy. According to the Alaska Air Carriers Association, there are 304 commercial operators in Alaska with 47,000[16] people employed in Alaska aviation. The amount of airfreight per person in Alaska is 39 times higher than the US average, amounting to almost one ton per person per year.[17] Air cargo shipments of POA originating goods are also made year round to resource development projects such as Red Dog Mine, Donlin Creek Mine, the North Slope, etc.

According to Alaska Airlines Air Freight, a "substantial" amount of POA originating cargo is sent to the Southeast Alaska communities of Cordova, Juneau, Wrangell, Petersburg, Sitka and Ketchikan. Once the cargo is delivered to these hub communities, smaller air carriers further distribute this Anchorage originating cargo to more remote villages in Southeast.[18]

Bypass Mail

Bypass mail plays a crucial role in delivering consumer goods to Western and Northern Alaska. Cargoes originating from the Port of Anchorage are delivered by truck or rail to the primary air cargo hubs of Anchorage, Fairbanks and Deadhorse. From there this cargo is flown either to the regional hubs of Bethel, Nome, Kotzebue, Dillingham, and Barrow, or flown directly to the villages. The U.S. Postal Service reports that these shipments total almost 100 million pounds per year, with 1.5 million pounds of bypass mail being shipped from Anchorage and 750,000 lbs shipped from Fairbanks every

[15] Northern Economics, *Port of Anchorage Consolidation & Distribution Study,* 2006.
[16] Alaska Department of Transportation & Public Facilities Commissioned Study, *The Economic Contribution of the Aviation Industry to Alaska's Economy,* 2008.
[17] Alaska Air Carriers Association, *Alaska Aviation Facts,* 2009.
[18] Specific cargo amounts and percentages are not available since one carrier, Alaska Airlines, flies almost all of this cargo and to publish it would reveal proprietary information.

week.[19] An additional 10 percent of cargo is flown at the full tariff air freight rate. Standard US Mail shipped through the Port of Anchorage is also delivered by air to rural Alaska.

Bypass mail provides a lower cost to consumers since air cargo is charged at "postage stamp rates" which means that cargo moves at $0.38 per pound regardless of which community it is shipped to, similar to the way a letter is charged the same rate regardless of where you are sending it. To send that same freight from Anchorage to Bethel via air freight or at standard postal rates for instance, would cost nearly twice that much. To send it to the outlying villages could cost up to 6 times that amount. The USPS pays for the difference in those prices which amounts to a "subsidy" of over $100 million per year.[20]

Bypass mail is organized into two categories:

1. Service to hubs; in planes fully loaded with cargo, or by combi service (a Boeing 737 configured for half freight in totes and half passengers) as offered by Alaska Airlines. These hubs are a legacy of the old postal hub communities. The number of providers is limited to those carriers who have provided this service in the past and have the capacity for hauling a minimum of 7,500 pounds.

2. Service to villages: Cargo is flown in conjunction with passenger flights on smaller aircraft that have at least 20 percent of the passenger market in those communities. In many cases the revenues from bypass mail are what keep these airlines serving these communities.

There is discussion within USPS of moving these hubs to communities that they estimate would be more efficient locations for them. However, this would require significant state expenditures to upgrade these airports, while current hubs have seen substantial improvements in their capabilities. Airports like Bethel, the second busiest airport in Alaska, are considering moving to a 24/7 schedule to accommodate all of their nighttime traffic in a safe and efficient way.[21] Any reductions in bypass mail service would impose a significant burden on people living in the villages who are already struggling to make ends meet due to the high cost of goods and energy.

[19] Phone Interview, USPS, October 2010.
[20] Personal Interview, Alaska Commercial Company, October, 2010.
[21] Personal Interview, Airport Manager, Bethel Airport, November, 2010.

TIER IV: CARGO TRANSHIPPED VIA WATER TO RURAL ALASKA

A significant amount of Western Alaska bound cargo is shipped by container vessel to Anchorage and then loaded to barges destined for Western Alaska. One of the barge operators serving western Alaska estimates that 25 percent of their cargo is transshipped via the Port of Anchorage. The remaining 75 percent of barge cargo is sourced directly out of Seattle.[22]

Horizon Lines has direct container service to Kodiak and Dutch Harbor/Unalaska. These ships carry cargo from the Port of Tacoma, discharge most of their cargo in Anchorage, take on additional cargo for Kodiak and Dutch Harbor and then return to Tacoma after making those port calls. They take Asian destination frozen fish from Southcentral and Kodiak to Dutch Harbor where it is loaded onto container ships headed for foreign destinations. Frozen fish from Kodiak and Dutch Harbor are backhauled to Tacoma for distribution to domestic markets.

Several consolidators and large scale retailers, such as Alaska Commercial, repackage cargo from the Port of Anchorage and then reload these containers on the Horizon vessels or Northland barges headed for Kodiak, Dutch Harbor and Western Alaska ports.

Fuel to Rural Alaska

Annually, 1.7 million barrels of refined petroleum product are shipped out of the Port of Anchorage to rural Alaska via barge[23].

Cargo Backhaul to the Port of Tacoma

On average, about 2 out of 10 containers is loaded with cargo for container ship return voyages to the Port of Tacoma. This cargo is comprised of: recycled items, frozen fish, household goods and vehicles for people moving out of Alaska, automobile and truck trade-ins, and rental car fleet inventories being returned to the West Coast.[24] As an example of how backhauled goods can have a strong impact on shipping rates, it is estimated that the backhaul of fisheries products alone can help reduce the cost of shipping goods to Alaska.[25]

COMMODITY DETAILS AND PORT EFFICIENCY ISSUES

"As Is" LO/LO and RO/RO Container Service

The current container service operated by Horizon Lines and TOTE is highly efficient. Four vessels a week supply around 90 percent of the

[22] Phone Interview, Northland Services, December, 2010.
[23] Port of Anchorage, 2009 Annual Tonnage Report
[24] Personal Interview, Horizon Lines, Totem Ocean Trailer Express, November, 2010.
[25] Personal Interview, Lynden Inc. 2010

merchandise goods and business supplies to Alaskans living west of Cordova. It is so efficient, particularly when combined with the capability for just-in-time delivery, that many retail outlets have drastically reduced, or even eliminated, their need for warehousing services. Coupled with bar code inventory systems, the products in many containers are taken from the vans and put directly on store shelves. These efficiencies allow retailers to offer a wide range of food and other commodities at a price that is little different from those in Seattle.

"To Be" LO/LO and RO/RO Container Service

When completed, the modernized Port of Anchorage will contribute to even greater efficiencies. The draft (depth) at the current dock is -35 feet, restricting the size of vessels that can call on the Port, while the three LO/LO container cranes on the current dock only have a nine container reach. A modern container ship is 16 containers wide and requires a deeper draft and larger cranes at port facilities.

The design of the new facility will provide seven berths of nearly 1,000 feet each that are capable of supporting either RO/RO or LO/LO operations, 49 feet of draft, and placement of the dock face farther out into the channel where it will be self-scouring. New container cranes will be able to reach across PANAMAX container ships, now the industry standard. These upgrades will improve the efficiency of container, commodity, RO/RO and automobile operations. Additional staging areas immediately behind the LO/LO and RO/RO operations will improve efficiencies there while construction of a railroad intermodal loading facility at the back of the port will make transfer operations to flat cars more efficient and reduce the need for drayage operations.

"As Is" Fuel Details

Fuel deliveries have been steadily increasing at the Port of Anchorage. The startup of the ultra-low sulfur diesel towers at the Petrostar facility in Valdez will further increase these deliveries to the POA. Currently about 7.7 million barrels of fuel are delivered to the Anchorage area by rail car annually.[26] An additional 4.5 million barrels come across the Port's dock.[27] ASIG operates the tank farm and valve manifolds that facilitate deliveries of jet fuel to the Ted Stevens Anchorage International Airport by pipeline.[28]

The tank farm at the airport is a subzone of the Foreign Trade Zone at the Port of Anchorage. Since most of this fuel is burned out of the US, there is a significant tax advantage to imported fuel. The crude oil refined at the Tesoro refinery in Nikiski is

[26] Port of Anchorage, Annual Tonnage Report 2010
[27] Port of Anchorage, *Annual Dock Tonnage 2001 – 2010*
[28] Personal Interviews, Petrostar Refinery, Alaska Rail Road Corporation, ASIG, October, 2010.

sourced out of Russia and UK. They also import substantial quantities of refined jet fuel from Korea.[29]

Currently, all general aviation gas (avgas) for Alaska comes through the Port of Anchorage which typically receives four or five tanker deliveries per year and are stored at the Port's tank farms. It is then distributed to Fairbanks, Mat-Su, and the North Slope by truck, and to Western and Southeast Alaska by barge. The Southeast Alaska trade in avgas is facilitated by favorable prices in Anchorage. If Southeast communities were to rely on direct tug and barge deliveries of avgas, these barges would have to travel as far as San Francisco to get avgas from the West Coast. Instead, they are serviced by tugs and fuel barges that are demobilizing from their Western Alaska trades and returning south in the fall. These tugs and barges make this return trip profitable by loading avgas at the POA and making deliveries to Southeast Alaska as they continue their return voyage.[30]

"To Be" Fuel Infrastructure Benefits

Fuel operations are also constrained by the current, limited draft at the Port of Anchorage. Larger petroleum product carriers, given the ability to make larger bulk deliveries, can potentially reduce the overall cost of fuel to consumers. Petroleum operators at the Port who supply fuel to Ted Stevens Anchorage International Airport have indicated the need for increased storage tanks to ensure deliveries of adequate volumes to cover peak periods of demand at the airport. Two dedicated POL berths with new environmentally friendly and state-of-the-art offload headers at the future petroleum docks provide opportunities for new storage capability and the ability to handle a wider variety of refined petroleum products. The newly added acreage behind the POL berths could be a siting source for additional tankage.

"As Is" Cement Offload and Storage Infrastructure

Cement is used in almost every construction project in the state, large and small. The Port of Anchorage is one of the only facilities in Alaska with bulk offloading capacity for cement ships. The ships arrive with dry cement carried in segregated hold compartments and are offloaded via a vacuum and pump system. The cement is transferred through a pipeline to storage tanks on railroad property. Trucks are used to transport the cement from the storage tanks to its final destination. Due to the limited draft at the port, the current bulk cement carrier can only load and receive 24,000 tons at a time despite the vessel's capacity of 40,000 tons.

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[29] Ostherimer, David. *Annual Report For Foreign-Trade Zone No. 160; October 1, 2008-September 30, 2009*

[30] Personal and Phone Interviews, Tesoro Alaska, September, 2010. PetroMarine, Delta Western Fuels, December, 2010.

"To Be" Cement Offload and Storage Infrastructure

Completion of the south replacement and extension phase of the intermodal expansion project will provide both a deeper depth of -45ft and new acreage for the construction of additional cement storage tanks. This could create a cost savings benefit to the shipper as they would be able to double their capacity, transporting 40,000 tons at a time while experiencing the same operational and crew cost with only a modest increase in fuel. The operators of the bulk cement facility at the Port have indicated that if they could utilize these efficiencies, they would construct additional cement silos at the Port on the newly added backlands created by the Port expansion. This would eliminate their current need to truck cement across town to a different storage facility.[31]

"As Is" Military Support

The Port of Anchorage currently serves all five military bases in Alaska through fuel, supplies, vehicles and deployments. In a 2009 letter to the U.S. Secretary of Transportation Ray LaHood, U.S. Senator Daniel Inouye (HI) wrote:

> For example, the Port of Anchorage is vital to our national defense. The Expansion project that is underway will provide further economic opportunities and further strengthen the military and diplomatic mission of the United States. The Port of Anchorage is one of only 19 ports designated by the Department of Defense as a Strategic Port. There are five military bases strategically located in Alaska (Elmendorf AFB, Ft. Richardson, Eielson AFB, Ft. Waignright, and Ft. Greely), and the Port is essential in serving the thousands of Army and Air Force personnel, that call Alaska home. Alaska is playing a larger role in the training of military personnel with more than 2 million acres of training grounds, where troops can train with close air support in live fire exercises. Without the Port of Anchorage, these key military bases would be out of business. (April 28, 2009)

As part of its designation as a Strategic Seaport, the Port of Anchorage must be able to provide enough dock space and acreage to support a military deployment within 72 hours notice. Currently, the Port has successfully demonstrated the ability to provide one 1,000-foot berth without ceasing normal commercial dock operations, and 25 acres of non-contiguous/non-adjacent staging, however this does not meet the military's stated needs.

"To Be" Military Support

The U.S. Transportation Command's Surface Deployment and Distribution Command, through the U.S. Maritime Administration, has indicated a new need for the Port to be able to provide 2,000 feet of berthing space with an adjacent 25 acres of staging area in support of a more expedited major unit deployment[32]. Upon completion of the expansion project, two

[31] Personal Interview, Alaska Basic Industries, October, 2010.
[32] US Department of Administration, Maritime Administration, *Port Planning Order*. (August 31, 2010)

1,000-foot berths and 25 acres of adjacent contiguous staging area can easily be provided with room for growth if needed. This future footprint further provides an easily secured and monitored area decreasing security costs for military users.

The gravel fill for the expansion project, 11 million cubic yards, will all be mined on Elmendorf Air Force Base and transported down a haul road to the Port. This arrangement has proved mutually beneficial to both parties. The Port benefits because the short transit distance generates a large cost savings for the project while the Air Force benefits as hills are removed at the end of the north-south runway creating land that can be developed and used as needed. Once the project is complete, the road that is currently used to transport gravel will be used for deployment, providing the military with direct access to a secured facility and avoiding the associated congestion on public roadways.

Interruption of Service

The efficiencies of the Port have significant advantages, but only so long as port operations remain uninterrupted. During the course of our surveys, businesses were asked how quickly their operations would be affected if operations at the Port were disrupted. Most businesses said they would feel the consequences within a week, two weeks at most. Beyond that time period, they indicated that the interruption would develop into a full blown crisis[33]. This highlights the seriousness of concerns about the stability of the current deteriorated Port structure in the event of a major earthquake.

Once completed the expanded facilities would significantly decrease this risk. The facilities are designed to withstand normal to moderate earthquakes with little to no damage. Given the past seismic history of the region, the design includes two berths designated as "essential facilities." These berths feature increased structural reinforcements and are designed to remain operational following a maximum level earthquake of equal or greater magnitude than the 1964 earthquake.

Manufacturing and Increased Backhaul Opportunities

The Port's newly added acreage can provide much needed industrial space for the manufacture of modules for the North Slope or for the construction of the Alaska gas pipeline. Potential developers of the gas line have already visited the Port to explore these opportunities. A recent report by Anchorage Economic Development Corporation (AEDC) indicates that industrial development lands in Anchorage that are suited for development are limited and dispersed.[34] The new uplands at the Port can help provide space for industrial development and staging.

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[33] See list of retail businesses interviewed in reference section

[34] Anchorage Economic Development Corporation, *Industrial Land Needs – The Outlook for Anchorage 2010-2030.* (2009)

Nearly 90 percent of the backhauled containers from the POA are empty. This is a potential area for increased economic activity that would have an additional benefit of reducing the cost of shipping. Although this has yet to be realized, value added processing of natural gas liquids from an Alaskan gas line could provide manufactured products for export. For example, ethylene processed into polyethylene beads, and butane processed into butyl rubber cants is the feedstock for plastic products such as automobile tires.[35]

POTENTIAL COST INCREASE DRIVERS

As previously mentioned, the efficiency of the existing distribution system is quite impressive. So much so that there is a large portion of the state's population that gives no real thought as to how things get on the store shelves. It is the efficiency of this transportation system that has contributed significantly to the ability to stabilize consumer prices for Alaskans. That being said, the balance is delicate. Here are a few potential sources of cost increases that, if realized, could easily upset that balance.

EPA Emissions Control Area

The requirements of this mandate, which are slated to take effect in 2015, would force Alaska-bound ship operators to use ultra-low sulfur diesel fuel in and near the Alaska coast. This fuel is much more expensive and safety concerns have been raised related to the low lubricating characteristics of this fuel. Once in effect, this could dramatically increase the cost of providing service to Alaska.[36]

Changes in Bypass Mail System

Reductions in the bypass mail system would have devastating effects on rural Alaska resulting in increased air shipping costs to rural villages by up to 500 percent. The recent proposal by U.S. Senator John McCain to eliminate the Essential Air Service program could increase the cost of air transportation including the transportation of consumer goods and other items to rural areas.

Proposed Container Tax

The states of Washington and California have both proposed container taxes to provide funds for transportation projects in their states. Alaska would be particularly and unfairly burdened with these fees since the bulk of our cargo arrives by container. The State of Alaska and the Alaska transportation industry rose up to vigorously oppose these measures and they were defeated. However, this issue may surface again and if adopted would significantly increase the cost of shipping goods to Alaska.

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[35] Chemical Manufacturers of America, Inc, *2010 Update: Cook Inlet Value Added Opportunity, for AEDA and ANGDA.*

[36] Personal Interviews, Horizon Lines, Totem Ocean Trailer Express, November, 2010.

Port Expansion Financing Plan

The Port of Anchorage secures funds for its intermodal expansion project from the federal government, the State of Alaska, and through contributions from its own annual profits. If the Port were required to bond completely for this project, to make the required payments towards those bonds would require substantial increases in port surcharge fees, from 3 to 8 times higher than current rates[37]. This would increase the cost of every single item, bulk or containerized, that passes through the POA. State and federal grants for the project negate the need to consider this option.

CONCLUSION

A modern, safe, survivable Port of Anchorage is critical to the lives of Alaskans. It is an economic driver that provides the needed commodities and business supplies Alaskans use in their everyday lives. It provides essential supplies to Alaska's construction and resource development industries and delivers the cars we use to get around in. The Port also provides jobs for Alaskans both through its direct operations and through the extensive web of transporters and facilitators that ultimately deliver the goods to Alaskans. It truly is the Port of Alaska.

[37] Based on tax-exempt bonding for capital costs of $300 to $750 million.

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Barrow
A & D Automotive & Jeep
Aamodt Construction Inc.
Arctic Coast Trading Post
Arctic Janitorial Service
Arctic Pizza
Astac Cellular
Barrow Quick Stop
Barrow Souvenirs & Gifts (Phillips Child Care)
Barrow Utilities & Electric (Bueci)
Boynton Office Systems
Borealis Glass Design
Browers Restaurant
Cornerstone community church
Ferreras Equipment, LLC.
Inupiat Cleaners/ Furshop/ Water service
King Eider Inn
Lucy's Fabric Shop
Napa Auto Parts (Eskimos Inc. Fuel and Parts)
North Slope Borough Vet Clinic
Northern Lights Restaurant
Osaka's Restaurant
Pepe's North of the Border
Sam & Lee's Restaurant
Top of the World Hotel

Mountain Village
Mt. Village Covenant Church

Saint Mary's
Mattys Truck Rental LLC.

Nome
Airport Pizza
Anchor Liquor
Arctic Trading Post
Aurora Inn
Breakers Bar
Builders Industrial Supply
Eds/Xerox Corp
Kawerak Inc.
Landons
Mai's Guest House
Mukluk Telephone Co.
N B Tweet & Sons
Nome Liquor Store
Nome Machine Works
Nome Outfitters Gun & Tackle
Outsiders Hardware
Our Saviors Lutheran Church
Quality Auto Parts
R J's Auto Repair
Rasmussen's Music Art
Rave'n Cuts
River of Life Assembly of God
Solid Green Bingo & Pull Tabs
Subway
Trails End
Veggo Alaska

Kotzebue
Arctic Chiropractic
Arctic Sun Pull Tabs/Kvfd
Baker Services
Baker Aviation Inc.
Custom Electronics
Empress Chinese Restaurant
First Baptist Church
Iva Baker
Thomas Bolen (Otter Enterprises)

Dillingham
Alaskan Espresso
B & B Bed & Breakfast
B & C Fiberglass Inc.
Beaver Creek Bed & Breakfast
Bristol Express
D & J Rentals
Dan's Raft & Camping Equipment
Dave Williams Aircraft Repair
Dillingham Liquor Store
Firewood Bed & Breakfast
Food Bank
JD B&B Reservations
Kae Williams Aircraft Repair
Kozy Kuspuk (Bush Outfitters)
Marx Merchandise
N & N Market Inc.
Nushagak Cab Co.
Osborn Tanks
Rae's Flower & Garden
Ram Auto & Equipment Repair
Sherry's Cuts & Curls
Southwest Salvage
Stelling Enterprises (Gas Stations)
Teddy's Convenient Store
U Pop em' Fireworks

Unalakleet
Essential Services (Plumbing & Heating)
Sleep Inn
Unalakleet City Clerk
Unalakleet Native Village-Housing

APPENDIX A:

List of over 250 Alaskan Communities served by the Port of Anchorage

Adak
Akiak
Akiachak
Akutan
Alakanuk
Allakaket
Ambler
Anaktuvuk Pass
Anchorage
Anchor Point
Anderson
Aniak
Anvik
Arctic Village
Atka
Atqasuk

Barrow
Beaver
Bethel
Bettles Field
Big Lake
Border
Boundary
Brevig Mission
Buckland
Butte

Candle
Cantwell
Central
Chalkyitsik
Chandalar
Chatanika
Chena Hot Springs
Chenega Bay
Chenik
Chevak
Chicken
Chikaloon
Chignik
Chiniak
Chitina
Chugiak
Circle
Circle Hot Springs
Clam Gulch
Clarks Point
Clear
Cold Bay
Coldfoot
Cooper Landing
Copper Center
Crooked Creek

Deadhorse
Deering
Deltana
Delta Junction
Diomede
Dillingham
Dot Lake
Dutch Harbor

Eagle
Eagle River
Eek
Egegik
Ekwok
Elim
Emmonak
English Bay
Eureka

Fairbanks
False Pass
Flat
Fort Glenn
Fort Greely
Fort Yukon
Fortuna Ledge
Fox

Gakona
Galena
Gambell
Girdwood
Glenallen
Golovin
Gordon
Grayling
Gulkana

Hamilton
Healy
Holy Cross
Homer
Hooper Bay
Hope
Houston
Hughes
Hulsia

Icy Bay
Iditarod
Iguigig
Ikatan
Iliamna
Indian
Ivanoff Bay

Kaktovik
Kaltag
Kanatak
Kanishna
Karluk
Kasigluk
Kasilof
Katalla
Kenai
Kenny Cove
Kiana
King Cove
King Salmon
Kipnuk
Kivalina
Kobuk
Kodiak
Kokhanok
Koliganek
Kongiganak
Kotlik
Kotzebue
Koyuk
Koyukuk
Kustatan
Kwethluk
Kwigillingok
Kwikpak

Lake Minchumina
Larsen Bay
Lavelock
Livengood
Long Lower Kalskag

Manly Hot Springs
Manokotak
Marshall
McCarthy
McGrath
Medra
Mekoryuk
Mentasta
Minto
Moose Pass
Mountain Village

Nabesna
Naknek
Napakiak
Nelson Lagoon
Nenana
New Stuyahok
Newhalen
Newtok
Nightmute
Nikiski
Nikolai
Nikolski
Ninilchik
Noatak
Nome
Nondalton
Noorvik
Northway
North Pole
Noyes Island
Nuiqsut
Nulato
Nunapitchuk
Nyac

Old Harbor
Ophir
Ouizinkie

Palmer
Paxson
Pedro Bay
Perryville
Petersville
Pile Bay
Pilot Point
Pilot Station
Platinum
Point Hope
Point Lay
Poorman
Port Alice
Port Alsworth
Port Graham
Port Heiden
Port Moller
Portage Creek
Prudhoe Bay

Quinhagak

Russian Mission
Rampart
Red Devil
Ruby

St. George Island
St. Marys
St. Michael
St. Paul Island
Salcha
Sand Point
Savoonga
Scammon Bay
Selawik
Seldovia
Seward
Shageluk
Shaktoolik
Sheldon Point
Shemya
Shishmaref
Shungnak
Skwentna
Slana
Slaterville
Sleetmute
Soldotna
South Naknek
Stebbins
Sterling
Stevens Village
Stony River
Sutton

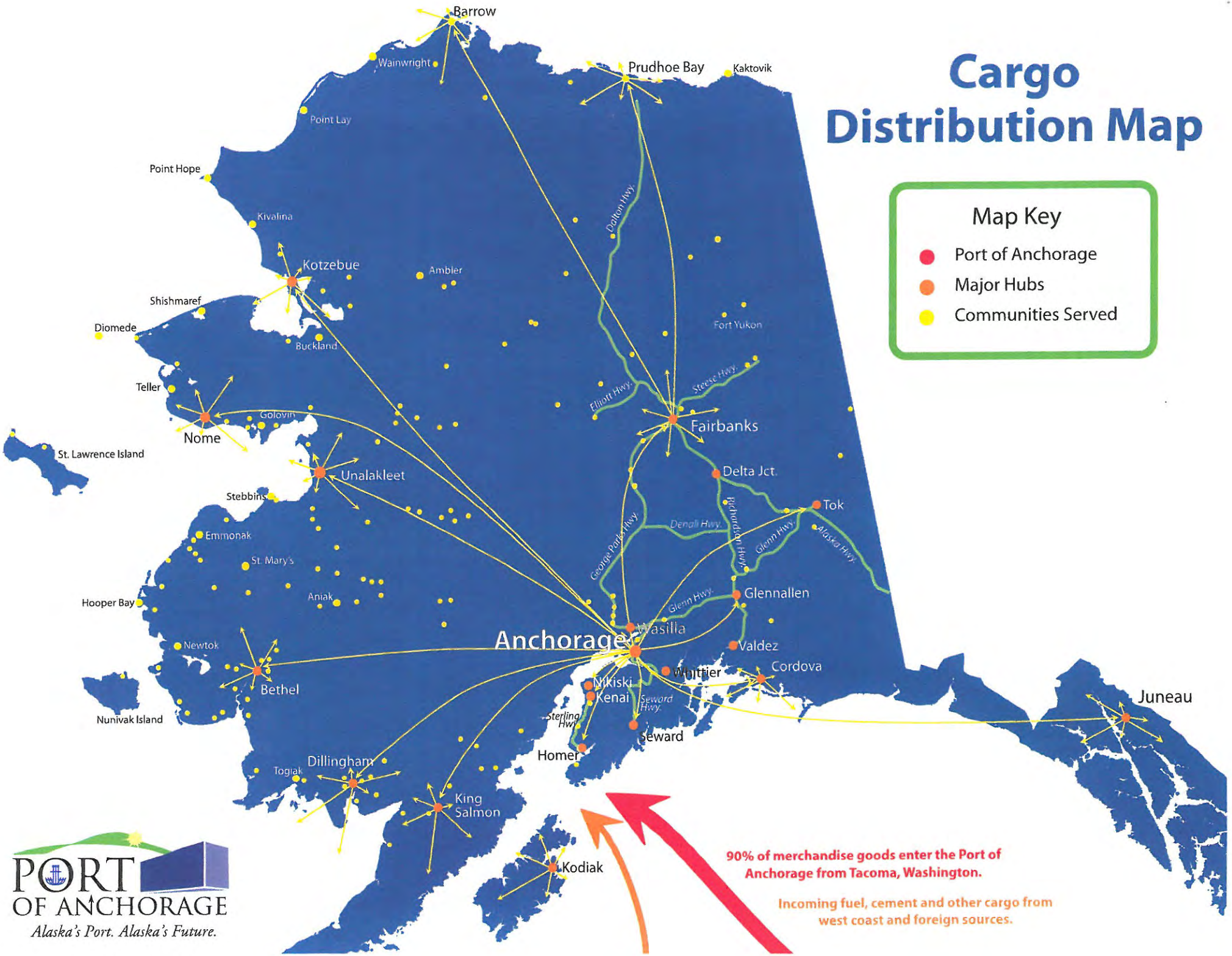
Takotna
Talkeetna
Tanacross
Tanana
Tatitlek
Teller
Tetlin
Tofty
Togiak
Tok
Toklat
Toksook Bay
Tonsina
Trapper Creek
Tuluksak
Tuntutuliak
Tununak
Twin Hills
Tyonek

Uganik
Umiat
Unalakleet
Unalaska
Unimak
Upper Kalskag

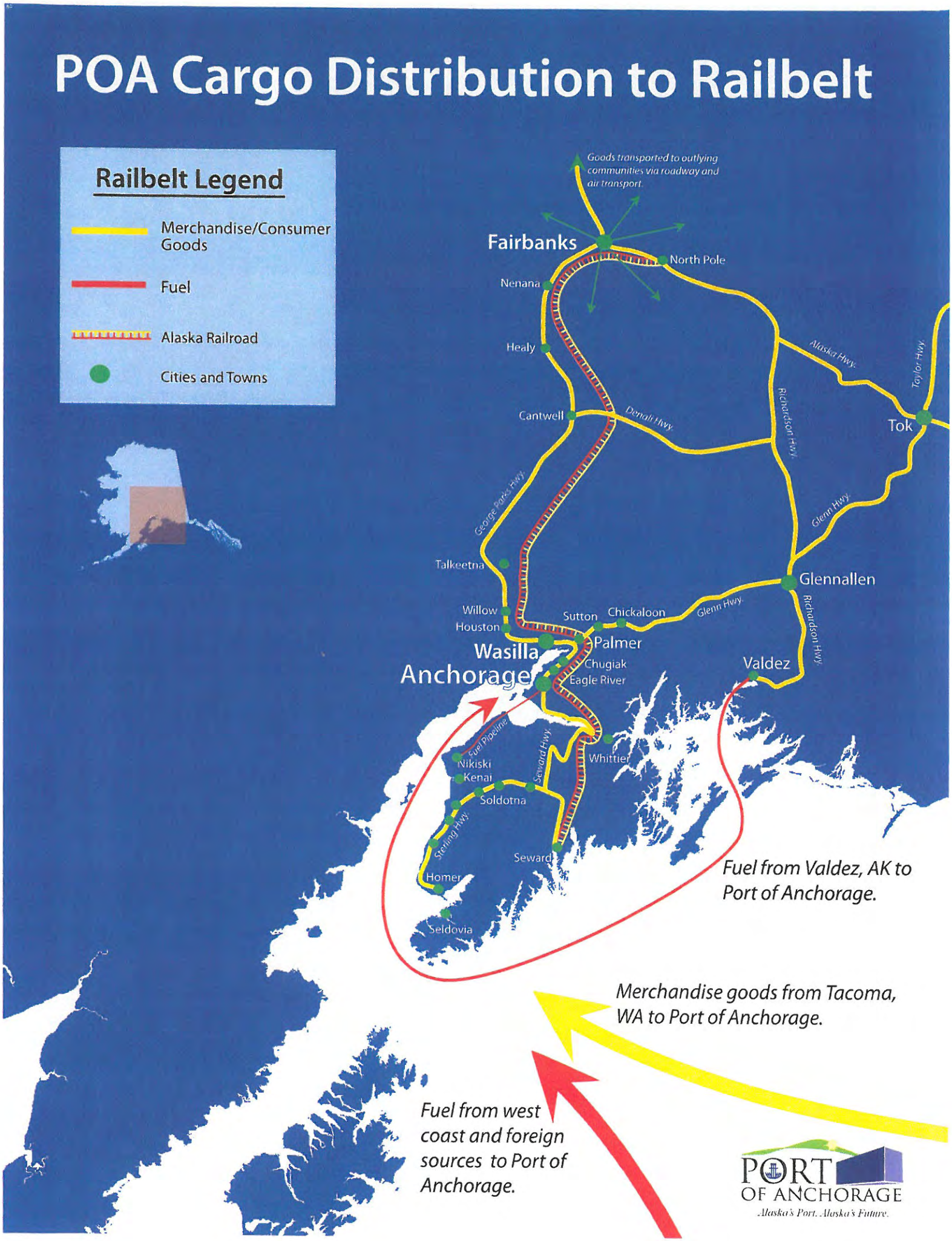
Valdez
Venetie

Wainwright
Wales
Wasilla
White Mountain
Whittier
Willow

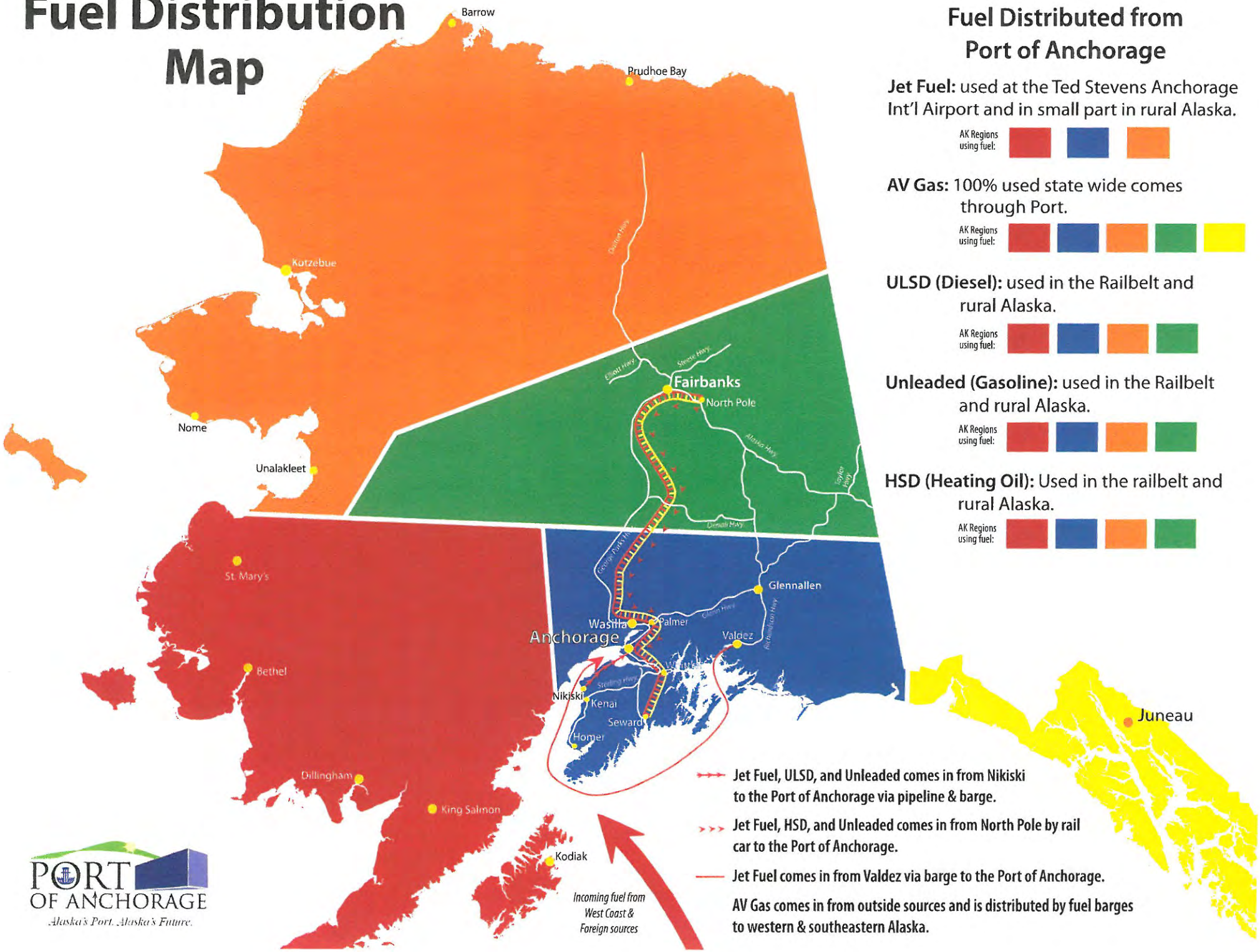
Cargo Distribution Map



POA Cargo Distribution to Railbelt



Fuel Distribution Map



Fuel Distributed from Port of Anchorage

Jet Fuel: used at the Ted Stevens Anchorage Int'l Airport and in small part in rural Alaska.

AK Regions using fuel:

AV Gas: 100% used state wide comes through Port.

AK Regions using fuel:

ULSD (Diesel): used in the Railbelt and rural Alaska.

AK Regions using fuel:

Unleaded (Gasoline): used in the Railbelt and rural Alaska.

AK Regions using fuel:

HSD (Heating Oil): Used in the railbelt and rural Alaska.

AK Regions using fuel:

PORT OF ANCHORAGE
Alaska's Port. Alaska's Future.

Municipality of Anchorage - Port of Anchorage | **FY2013 Request: $200,000,000**
Reference No: 41956

AP/AL: Appropriation
Category: Development
Location: Anchorage Areawide
Impact House District: Anchorage Areawide (HD 17-32)
Estimated Project Dates: 07/01/2012 - 06/30/2017

Project Type: Construction
Recipient: Municipality of Anchorage
House District: Anchorage Areawide (HD 17-32)
Contact: JoEllen Hanrahan
Contact Phone: (907)465-2506

Brief Summary and Statement of Need:
This project will provide funds for the Port of Anchorage Expansion project. The Port of Anchorage expansion project has been scaled back in size and scope. This funding will be used to construct two barge berths and two ship berths to the north of the existing dock. Completion of the north end expansion is critical as it will allow the main shippers to safely berth and move cargo in an upgraded and expanded facility built to a higher degree of seismic stability. The general obligation bond authorization is considered one-time in nature and is not expected to fully fund the project.

Funding:	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	Total
G/O Bonds	$200,000,000						$200,000,000
Total:	$200,000,000	$0	$0	$0	$0	$0	$200,000,000

☐ State Match Required ☑ One-Time Project ☐ Phased - new ☐ Phased - underway ☐ On-Going
0% = Minimum State Match % Required ☐ Amendment ☐ Mental Health Bill

Operating & Maintenance Costs:

	Amount	Staff
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	
Totals:	0	0

Additional Information / Prior Funding History:
FY2012 - $30 million GF SLA11, Ch 5, Sec 1, Pg 20, Ln 13; FY2011 - $20 million SLA10, Ch 43, Pg 80, Ln 9; FY2010 - $10 million SLA09, Ch 15, Pg 3 Ln 20; FY2010 SLA09, Ch 15, Pg 44, Ln 12; FY2009 - $15 million SLA08 CH 29, Pg 114, Ln 14; FY2009 $10 million SLA08, Ch 29, Pg 185, Ln 11; FY2008 - $10 million SLA07, Ch 11, Pg 74, Ln 7; FY2007 $10 million SLA06 Ch 82, Pg 51, Ln 29; FY2006 - $10 million SLA05 Ch 3, Pg 41, Ln 6

Project Description/Justification:
The Port of Anchorage (POA) serves 80 percent of Alaska's population as the entry point for 90 percent of consumer goods and petroleum products that are shipped to Alaska. The POA directly impacts the quality of life and the cost of daily goods for more than 200 communities in Alaska. The POA plays an essential role in economic development, military operations, and businesses throughout the state. In terms of economic impact, the POA contributes $1.4 billion annually to local and state economies, including hundreds of construction related jobs along with dozens of long term employment opportunities. The POA has served the State for 50 years and is in a deteriorated condition leaving it vulnerable to failure following a high magnitude earthquake.

Background: The POA Intermodal Expansion Project is a federal DOT project under the Maritime Administration (MARAD). The project began in 2003 with the objective to provide modern, efficient, and expanded infrastructure built to a higher degree of seismic stability. Partners in the project include the State of Alaska, Municipality of Anchorage-Port of Anchorage and port tenants and stakeholders. In the fall of 2011, the Municipality of Anchorage signed a new memorandum of agreement with MARAD that established the transfer of procurement and construction responsibilities to the Municipality, or their designees, by May 31, 2012.

Overall, this project has four primary objectives:

- Accommodate existing customer requirements;
- Accommodate growth and demand for Port services, especially with respect to potential new customers and the new generation of vessels anticipated to call at the POA;
- Stimulate economic development for the Municipality and the region by providing marine and landside transportation system improvements; and
- Better serve the military in the Port's role as the nation's 15th Strategic Seaport. The U.S. Maritime Administration (MARAD) has been designated as the federal lead agency for POA development.

Due to the overarching goal of maintaining 100% commercial operations throughout the duration of the project, it is progressing in phases. This funding will allow for the construction of two barge berths and two ship berths to the north of the existing dock. When completed, the POA will be able to move current container and general cargo operations off of the old deteriorating facility onto new berthing spaces built to a higher degree of seismic stability.