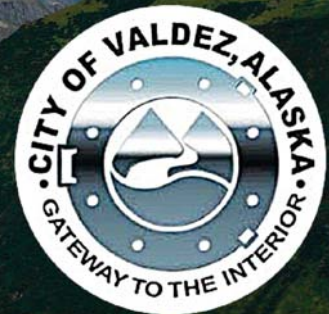


Competitive Market Analysis and
Long Range Planning for the

Port of Valdez

September 2015

Prepared for



Prepared by


McDowell
GROUP

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Juneau • Anchorage

September 2015

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Summary of Key Findings

To better understand the competitive Southcentral freight market, and to help Valdez position itself for continued relevance, the City of Valdez contracted with McDowell Group to analyze the competitive position of the Port of Valdez and to identify development opportunities.

Valdez has played an important role in the economic development of Alaska, given its strategic location, deep water port, and access to Interior Alaska communities and resources. The port offers commercial shippers important linkages between Alaska and world markets. Yet, it captures only a small percentage of the freight shipped in and out of Southcentral Alaska's ports.



The project methodology included a Valdez site visit

The city of Valdez and Valdez Container Terminal.
Source: City of Valdez.

and interviews with 40 Alaskans knowledgeable about commercial shipping, Alaska ports, and key economic drivers. The project team also compiled transportation and shipping data from a variety of public sources and reviewed numerous reference documents concerning transportation, freight, and economic development.

Information was synthesized from the project tasks into a detailed analysis of freight movements in and out of Alaska, a comparative analysis of major Southcentral ports including infrastructure and rates, and a gap analysis, including recommendations to increase port use and port-related economic activity.

Key findings from the study are presented below.

Competitive Environment

Alaska's Freight and Cargo Network

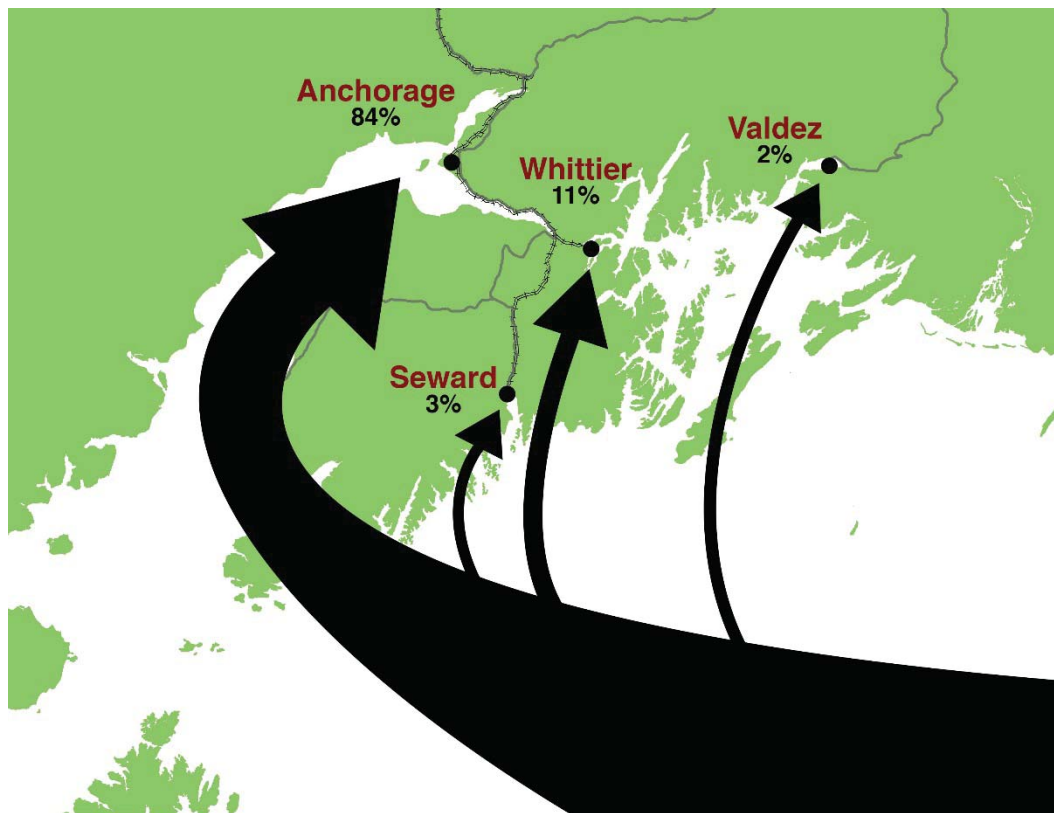
- The Port of Valdez operates in a complex and highly competitive freight transportation environment, given the numerous transportation options available in other Southcentral ports, as well as trucking, rail, and air service modes.
- The total tonnage of waterborne, non-petroleum, non-coal freight moving through Southcentral port facilities is estimated at 2.2 million tons annually. Approximately 80 percent of this volume is in-bound.

- Freight entering Southcentral ports is transshipped by rail, truck, air, and barge to locations throughout Alaska.
- In 2014, commercial truck traffic on the Parks Highway was more than three times traffic levels on the Richardson Highway.
- The Southcentral and Interior Alaska markets also include freight trucked to and from Alaska via the Alaska Highway; an estimated 10 percent of the general surface freight shipped into Alaska arrives via truck.

Relative Market Share by Port

- Based on 2013 data and McDowell Group estimates, 84 percent of in-bound, non-petroleum freight shipped through Southcentral Alaska moved over Anchorage docks. Whittier is a distance second, at 11 percent, Seward accounts for approximately 3 percent, and Valdez totals 2 percent of regional freight volume.

Estimated Market Share of Southcentral Non-Petroleum, Non-Coal Freight Volume, 2013



Source: Corps of Engineers, 2015; McDowell Group Estimates.

Port of Valdez Market Position

Strategic Positioning

- Valdez port and freight facilities are recognized as being capable compared to other ports.
- The distance from Alaska's population centers and lack of rail transportation place Valdez at a disadvantage when competing for freight volume.
- Proximity to North Slope oil and gas activity, and Interior mines, communities, and military bases is an asset.
- Direct access to the Alaska Interior and the North Slope along the relatively uncongested Richardson and Dalton Highways represents an advantage for some shippers.
- Valdez has a reputation for capably handling oversize freight.
- The availability of significant uplands are an advantage over other ports when a natural gas pipeline or other major developments are contemplated.

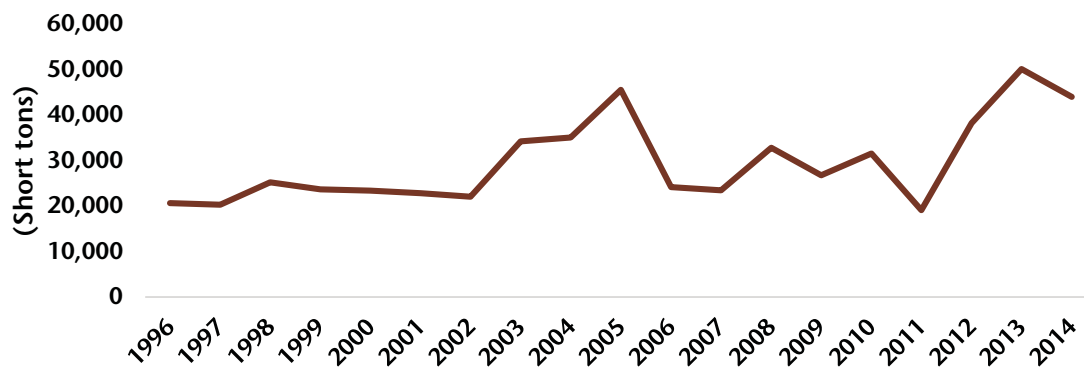


Tracked vehicles destined for the North Slope are unloaded in Valdez.
Source: City of Valdez.

Port of Valdez Freight Movement

- In 2014, 44,000 tons of freight moved through the Port of Valdez, with approximately 55 percent outbound shipments. Port activity has grown in the last two decades; average freight volume between 2002 and 2011 was approximately 30,000 tons.
- Port activity is dominated by movement of seafood, mining supplies, shipment destined for the North Slope, construction materials, and one-off oversize shipments, such as the girders for the Northern Rail Extension Bridge.
- Out-bound shipments of salmon have grown significantly in the last five years and will likely continue to grow. Silver Bay Seafoods' expansion of their Valdez seafood processing facility has the potential to double or triple the amount of refrigerated containers moved through the Port.

Port of Valdez Cargo Freight Volume (short tons), 1996 to 2014



Source: Port of Valdez, 2015.

Rates and Services

- When considering whether to use port facilities in Valdez, Whittier, Seward, Anchorage or Port MacKenzie – a variety of factors come in to play. The specific kind of freight (weight, dimensions, time sensitivity, etc.), distance to end user, multi-modal transshipment opportunities/requirements, economies of scale associated with serving other customers simultaneously, and the cost of actually using the port are all part of that equation.
- Wharfage rates and other port fees are generally competitive with other Alaska ports.
- The “exclusive” arrangement for stevedoring services is unique relative to other Southcentral ports. It creates efficiencies for some shippers, given ready access to equipment and personnel. However, it also may increase costs for shippers.
- Given the proprietary nature of data concerning operating costs for any individual shipper, it is not possible within the scope of this study to draw any particular conclusions about shippers’ response to an “open” stevedoring model in Valdez.

Marketing and Development Strategies

- Market development efforts should be approached in conjunction with city and business leaders – the Port alone will not be as effective.
- Regional partnerships with Fairbanks Greater Chamber of Commerce and Fairbanks Economic Development Corporation can increase visibility with key customers including Interior military bases, Alaska Native Corporations, and Alaska mines.
- In the near term, the most likely growth sectors include seafood, the military, and possibly mining.
- Longer term growth potential for Valdez includes gasoline and Arctic development. However, given the long lead times for planning and development, Valdez should establish key relationships now.
- A detailed analysis of infrastructure needed for the AKLNG Project is underway and is expected to be released in fall 2015. Commercial shippers and industry leaders anticipate that Valdez, like other Southcentral ports, will require extensive use given the lengthy construction period, high volume of in-bound freight, and need for extensive uplands to support the project. Further, the project could

stimulate commercial shipping operators to increase their Valdez presence for the duration of the project.

- While the Port of Valdez infrastructure is regarded as favorable, suggestions offered by commercial shippers included lighting and bollards for the landing dock, additional plug-ins for reefer containers, a platform for landing crafts, mooring dolphins, and a freight handling facility.

Introduction and Methodology

Valdez has played an important role in the economic development of Alaska, as a result of its strategic location, deep water port, and access to Interior communities and resources. The port offers commercial shippers important linkages between Alaska, the Pacific Northwest, and the world. Despite a long tradition of maritime activity and extensive port infrastructure, in recent years Valdez has captured only a small percentage of all freight and cargo shipped through Alaska's ports. The City of Valdez contracted with McDowell Group to analyze the competitive position of the Port of Valdez and to identify development opportunities. The project methodology included the following tasks:

- The project team conducted a site visit in April. In addition to touring the Valdez waterfront and port infrastructure, team members met with public officials, Port Commissioners, and a number of local residents involved with commercial shipping and the port.
- The Southcentral region described in this report include port facilities in Anchorage, Port MacKenzie, Seward, Whittier, Homer, and Valdez.
- Interviews were conducted with industry leaders in mining, oil and gas, commercial fishing, and transportation and shipping sectors, and other key economic drivers. Additionally, the project team interviewed representatives of several Alaska Native Corporations, economic development officials, and others knowledgeable about Alaska's economy. A list of contacts is included in the Appendix.
- The project team compiled transportation and shipping data from a wide array of sources, including the City of Valdez, Alaska Department of Transportation and Public Facilities (Alaska DOTPF), U.S. Army Corps of Engineers (COE), and Alaska Marine Highway. Port volume data from individual ports often differs from COE data. Additional analysis by McDowell Group incorporates estimates of private facilities gaps not necessarily included in COE and individual public port data.
- The project team also reviewed a wide array of resource documents concerning transportation, shipping, and the economy of Valdez. A list of documents is also included in the Appendix.
- Information was synthesized from the project research tasks into a detailed analysis of freight movements in and out of Alaska, a competitive analysis of other Alaska ports, and a Gap Analysis, including recommendations for infrastructure improvements and strategies to increase port use and local economic activity.
- Project findings will be presented at a public work session at the conclusion of the project.

Though large volumes of petroleum products, as well as coal, move into and out of Southcentral Alaska's ports, this study focuses on non-petroleum or coal freight. It is this market, including containerized freight, break-bulk cargo, equipment, construction materials, and a variety of specialized freight that is of the most interest to the Port of Valdez as it considers how to capture a greater share of the region's freight movement.

Southcentral/Interior Freight Profile

The Port of Valdez competes in a large, complex, highly competitive freight transportation environment. Much of the goods and materials consumed in Southcentral, the Interior, and the North Slope move through Southcentral ports. The Port of Valdez also competes against overland truckers who move freight to various Alaska destinations. This chapter describes how freight moves into and out of Southcentral Alaska.

Regional Overview

The estimated total tonnage of waterborne non-petroleum freight shipments moving in-bound through Southcentral ports annually is approximately 2.2 million tons. This estimate is described in more detail following a brief overview of freight data from other sources.

REGIONAL ARMY CORPS OF ENGINEERS WATERBORNE COMMERCE STATISTICS

The only published data available concerning waterborne freight movements through Southcentral ports is compiled by the U.S. Army Corps of Engineers (COE). That data is based on annual reports filed by shippers; however, the data is generally incomplete and in some cases inaccurate for particular commodities. Nevertheless COE data provides a sense of scale and trends.

COE data indicates a total of 2.44 million short tons of freight moved in-bound and out-bound through Southcentral ports in 2013 (the latest available COE data). This includes the ports of Anchorage, Homer, Seward, Whittier, and Valdez. Just over 80 percent of this freight is in-bound, at 2.02 million short tons in 2013. According to COE data, the annual tonnage of in-bound freight has been reasonably steady over the past decade, ranging between a low of 1.93 million tons and a high of 2.2 million tons. Out-bound freight is more variable, due largely to spikes in fish shipments ranging between 225,000 short tons and 513,000 tons annually over the past 10 years.

Total Southcentral Non-Petroleum Freight Shipments (1,000s of short tons), 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total In-bound	2,049	2,198	2,072	1,982	1,996	1,928	1,951	1,941	2,042	2,020
Total Out-bound	372	513	345	373	341	225	285	238	278	423
Grand Total	2,421	2,711	2,417	2,355	2,337	2,153	2,236	2,179	2,320	2,443

Source: Corps of Engineers, 2015. Out-bound excludes coal shipped through Seward.

Miscellaneous consumer goods account for about half of the in-bound freight (classified as “manufactured products, not elsewhere classified (NEC)”). Groceries are another large category of in-bound freight; however, data for this category illustrates the vagaries of the COE data, showing an inexplicable decline in grocery freight over the past five or six years. Clearly, as the populations of Anchorage, Mat-Su Borough, Kenai Peninsula Borough, and Fairbanks have grown, so too has the demand for groceries. The decline no doubt reflects some change in how the data was reported (or not reported).

Cement/concrete and lumber are two other types of high-tonnage freight, with trends generally tracking activity in Alaska's construction industry.

Total In-Bound Southcentral Non-Petroleum Freight Shipments (1,000s of short tons), 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total In-bound	2,049	2,198	2,072	1,982	1,996	1,928	1,951	1,941	2,042	2,020
Manufac. Prod. NEC	950	1,011	974	1,000	1,023	1,036	1,073	1,108	1,106	1,087
Groceries	338	349	320	334	322	216	209	212	218	190
Cement & Concrete	115	173	140	150	155	152	130	94	117	120
Lumber	99	178	151	147	127	89	88	98	112	108
Vehicles & Parts	75	74	67	70	76	65	78	76	102	82
Fab. Metal Products	55	66	54	58	45	21	16	41	48	71
Misc. Mineral Prod.	59	33	42	35	38	33	36	42	44	45
Food Products NEC	5	4	8	16	18	88	78	43	50	48
Fish (Not Shellfish)	12	25	109	26	14	10	28	18	25	32
Alcohols	30	28	35	19	24	37	26	18	8	21
Primary Wood Prod.	16	21	20	17	20	18	18	26	25	26
Other	295	236	152	110	134	163	171	165	187	190

Source: Corps of Engineers, 2015.

Out-bound freight totals only about one-fifth of the in-bound volume, at about 423,000 tons in 2013. "Manufactured products, not elsewhere classified (NEC)" is again the largest category; this is presumed to be mainly empty south-bound containers. Fish is the largest identifiable component of out-bound freight, followed by scrap metal. Out-bound freight spiked in 2013 as a result of a big increase in fish shipments. Record pink salmon harvests were recorded in 2013.

Total Out-Bound Southcentral Non-Petroleum Freight Shipments (1,000s of short tons), 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Out-bound	372	513	345	373	341	225	285	238	278	423
Manufac. Prod. NEC	146	134	139	133	139	119	126	124	134	131
Fish (Not Shellfish)	45	44	66	109	40	62	81	43	46	115
Wood in the Rough	56	19	28	57	67	0	0	0	0	25
Vehicles & Parts	16	21	23	16	16	15	19	40	18	19
Wood Chips	45	141	0	0	0	0	0	0	0	0
Fish, Prepared	13	18	21	12	26	9	17	8	17	19
Iron & Steel Scrap	19	16	17	0	6	0	0	1	35	46
Fab. Metal Products	8	9	7	22	6	3	4	4	3	5
Other	24	111	44	24	41	17	38	18	25	63

Source: Corps of Engineers, 2015. Out-bound excludes coal shipped through Seward.

Port Market Share Analysis

Anchorage

There are three port facilities in Anchorage, including the Port of Anchorage (POA) (owned by the Municipality of Anchorage) and two other marine cargo facilities, one owned by Alaska Marine Lines (AML, a Lynden company), and the other by North Star Terminal & Stevedore Co. POA is the dominant port facility in Anchorage and the Southcentral region, in terms of tonnage moved.

Freight Estimates

Based on 2013 COE data, 84 percent of in-bound Southcentral non-petroleum freight moves over Anchorage docks. Including the municipally-owned POA and adjacent privately-owned barge landings, 1.7 million tons of marine freight came into Anchorage in 2013. The volume of in-bound freight through Anchorage has been reasonably steady, hovering around the 1.6 million to 1.7 million ton range for the past several years.

Anchorage Non-Petroleum In-bound and Out-bound Freight Shipments
(1,000s of short tons), 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013
In-bound	1,933	1,779	1,706	1,736	1,628	1,713	1,657	1,720	1,703
Manufac. Prod. NEC	968	926	945	961	977	1,024	1,036	1,021	1,018
Groceries	342	312	326	312	207	203	205	210	178
Cement & Concrete	156	109	122	120	112	120	90	115	113
Lumber	155	127	120	111	75	78	87	98	93
Vehicles & Parts	73	65	68	73	62	75	71	97	79
Fab. Metal Products	56	43	44	35	9	10	31	31	57
Misc. Mineral Prod.	26	28	20	29	25	28	34	29	35
Primary Wood Prod.	14	17	11	16	15	17	24	20	22
Other	143	152	50	79	146	158	79	99	108
Out-bound	419	335	324	289	211	229	215	230	390
Manufac. Prod. NEC	117	112	122	137	112	123	121	129	127
Fish (Not Shellfish)	20	47	80	26	52	44	26	20	83
Wood in the Rough	19	28	57	67	0	0	0	0	25
Vehicles & Parts	21	23	16	16	15	19	40	18	19
Iron & Steel Scrap	16	17	0	6	0	0	1	34	46
Other	226	108	49	37	32	43	27	29	90
Total	2,352	2,114	2,030	2,025	1,839	1,942	1,872	1,950	2,093

Source: Corps of Engineers, 2015.

Out-bound freight from Anchorage totaled 390,000 tons in 2013, over 90 percent of the Southcentral out-bound total. Empty containers likely account for the majority of this tonnage, though a substantial volume of fish (83,000 tons) left the state through Anchorage marine terminals in 2013.

Based on COE and POA data, in 2013 POA accounted for 90 percent of total in-bound and out-bound non-petroleum marine freight moving through Anchorage, and 75 percent of the regional total.

Detailed research conducted by McDowell Group indicates that the total volume of in-bound freight moving over Southcentral docks in 2013 was slightly greater than reported by COE. McDowell Group estimates that in 2013, a total of 2.2 million short tons of waterborne non-fuel freight arrived in Southcentral ports. POA accounted for 74 percent of all Southcentral in-bound non-petroleum freight that year.

In-bound Southcentral Waterborne Freight (Non-Petroleum), 2013

	1,000s of Short Tons	Market Share
Port of Anchorage	1,636	74%
All Other Southcentral Ports*	564	26%
Southcentral Totals	2,200	100%

*Includes Anchorage barge terminals outside POA.

Source: McDowell Group estimates.

POA's dominance in Southcentral marine freight stems from service provided by container or roll-on/roll-off ships operated by Horizon Lines (recently acquired by Matson) and Totem Ocean Trailer Express (TOTE, a Saltchuk company). Both operators serve Anchorage from Tacoma twice weekly. From Anchorage, TOTE vessels return directly to Washington, while Horizon Line vessels call in Kodiak and Dutch Harbor before returning to Washington.

In 2013, TOTE and Horizon Lines combined brought in 1.51 million tons of freight to POA. That volume accounts for approximately 83 percent of all van/container/platform general cargo moving into Southcentral via marine carrier. The in-bound Southcentral van/container/platform general cargo market is estimated at about 1.81 million tons annually, based on 2013 data. Other van/container/platform general cargo comes into Southcentral on scheduled AML and Samson Tug and Barge barges serving Anchorage (AML), Whittier (AML), Seward (Samson) and Valdez (Samson and AML).

Container vessels bring in household and other consumer goods, construction materials, and a broad range of supplies to support business and industry in Alaska. Household and consumer goods make up 80 to 85 percent of in-bound containerized shipments and include items such as groceries, household items, recreational equipment, and vehicles.¹ Container vessels leave Anchorage with mostly seafood and lesser amounts of household goods, recyclables, and scrap materials.

In-bound Southcentral Waterborne Van/Flat/Container General Cargo, 2013, POA and All Other Ports

	1,000s of Short Tons	Market Share
Port of Anchorage	1,512	83%
All Other Southcentral Ports*	300	17%
Southcentral Totals	1,812	100%

*Includes Anchorage barge terminals outside POA.

Source: McDowell Group estimates.

¹ Personal communication, TOTE, Renata Bennett, 2014

Other marine cargo shipments into Anchorage enter through facilities not affiliated with the POA. AML offers barge service to its Anchorage terminal once a week during the ice-free season, generally from April or May through September or October. Freight shipments also come through the Anchorage facilities of North Star Terminal & Stevedore Co. Tonnages and types of freight moved through these private facilities is proprietary and therefore not available for publication.

Anchorage and POA specifically is the portal through which most of the Railbelt's bulk cement is shipped. POA the only port in Southcentral able to handle bulk containerships of cement. The 2014 volume of bulk cement was 141,000 tons.

Total Port of Anchorage In-bound and Out-bound Freight (1,000s of short tons), 2005 to 2014

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Vans/Flats/ Containers	2,081	1,723	1,786	1,832	1,713	1,737	1,705	1,659	1,743	1,811
Cement, Bulk	149	135	122	117	75	104	118	115	112	141
Vehicles	4.1	1.1	5.4	10.7	1.5	0	<1	0	0	0
Freight, NOS	<1	20	<1	<1	<1	0	0	15	5	6
Iron/Steel	0	<1	2.6	0	6.3	4.9	0	5.4	7	0
Total	2,234	1,878	1,915	1,959	1,796	1,846	1,824	1,794	1,867	1,957

Note: Figures may not sum due to rounding.

Source: Port of Anchorage, 2015.

In summary, Anchorage port facilities serve markets throughout the entire state. In-bound goods support the local needs and are also shipped by rail or highway to other communities along Alaska's Railbelt. Marine freight arriving in Anchorage moves beyond the Railbelt as well; goods are flown to remote villages and construction materials and supplies are trucked on the Dalton Highway to support the North Slope oil and gas exploration, development, and production.

Export activities in Anchorage support the seafood industry, shipping Alaska seafood to foreign and domestic markets. Port facilities in Anchorage also transport waste and materials out-of-state due to limited in-state capacity for waste disposal and recycling.

Whittier

Whittier is Southcentral's second largest port in terms of annual freight volume. The Port of Whittier, owned and operated by the Alaska Railroad, is serviced by a rail barge owned by the Canadian National Railway Company (CN) and operated by Foss Maritime. CN's "Aquatrain" barge delivers to Whittier from Prince Rupert two to three times a month, year-round. AML provides rail barge service to the Port of Whittier once a week year-round. AML's barge has a rail deck and a container deck. Containerized freight AML delivers through Whittier is redistributed to Cordova, Valdez and remote locations via barge and to Anchorage, Fairbanks and other destinations via rail and/or truck.

Freight Estimates

COE data indicates that Whittier had about 14 percent of the Southcentral in-bound marine freight market in 2013, with 276,000 tons of in-bound freight. Including in-bound and out-bound freight, Whittier accounts for about 11 percent to total reported regional tonnage.

Freight arriving in Southcentral (via Whittier) on rail cars onboard the AML and CN rail barges is estimated at approximately 200,000 tons annually. This volume does not include AML's containerized freight, which is placed on a rail car, truck or another barge in Whittier for distribution to other communities in Southcentral and Interior Alaska.

Whittier In-bound and Out-bound Freight Shipment (1,000s of short tons), 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
In-bound	204	245	261	247	261	313	256	240	245	276
Manufac. Prod. NEC	39	39	45	49	58	54	46	65	79	62
Alcohols	30	28	34	19	24	37	26	18	8	19
Food Products NEC	5	4	8	15	18	13	19	38	46	43
Fish (Not Shellfish)	12	23	19	26	14	10	28	18	25	32
Cement & Concrete	20	17	31	28	35	40	9	3	2	7
Lumber	11	16	15	17	10	10	8	5	3	8
Machinery (Not Elec)	9	12	10	9	10	13	8	4	1	7
Paper & Paperboard	10	22	17	10	9	7	3	1	0	0
Fab. Metal Products	6	8	9	12	8	10	5	5	6	7
Other	62	76	73	62	75	119	104	83	75	91
Out-bound	46	25	34	18	9	12	10	9	9	11
Manufac. Prod. NEC	42	16	27	11	2	3	3	2	2	3
Fab. Metal Products	1	2	2	2	2	2	1	2	2	2
Manufac. Wood Prod.	1	1	2	1	1	2	1	1	1	1
Other	2	6	3	4	4	5	5	4	4	5
Total	250	270	295	265	270	325	266	249	254	287

Source: Corps of Engineers, 2015.

The main customers of the Railroad's Whittier facilities are the natural resource industries. Machinery, building materials, and oil and gas drilling fluid and mud are all transported via the rail barge. Railroad facilities also support the local Whittier seafood processing and tourism businesses.

Seward

Seward is estimated to be the third largest port, in terms of freight volume, in Southcentral behind Anchorage and Whittier. Two port facilities operate out of Seward, one owned by the Alaska Railroad Corporation (ARRC), and the other owned and operated by the City of Seward. As the state's only port with coal loading facilities, coal has accounted for most of the out-bound marine cargo through the ARRC port.

Freight Estimates

According to COE data, over the 2011 to 2013 period, approximately 50,000 tons of in-bound marine freight moved through Seward. In 2013 Seward accounted for about 3 percent of the Southcentral total in-bound and out-bound freight. However, the accuracy of the COE data for Seward is uncertain; the actual market share of in-bound freight is estimated to be higher than what is indicated by COE data, as it does not include all data detailing specific non-coal freight movement through the ARRC facility in Seward.

Seward In-bound and Out-bound Freight Shipment (1,000s of short tons), 2004 to 2013

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
In-bound	26	17	25	25	13	13	8	40	69	44
Lumber	6	7	9	10	6	4	2	6	11	7
Misc. Mineral Prod.	7	5	9	7	4	5	4	7	13	7
I&S Pipe & Tube	3	2	4	3	0	0	0	3	4	5
Primary Wood Prod.	1	2	2	3	2	1	1	1	5	3
Manufac. Prod. NEC	1	0	0	1	1	1	0	5	4	4
Fab. Metal Products	0	0	0	0	0	0	0	3	9	4
Other	8	1	1	1	0	2	1	15	23	14
Out-bound	573	505	403	226	580	890	949	1,071	891	668
Coal	570	505	403	226	579	886	949	1,071	890	641
Other	3	0	0	0	1	4	0	0	1	27
Total	599	522	428	251	593	903	957	1,111	960	712
Total Excl. Coal	29	17	25	25	14	17	8	40	70	71

Source: Corps of Engineers, 2015.

Seward port facilities serve a diverse set of customers. Usibelli Coal Mine relies on the Seward port to export coal to overseas markets. Several facets of the tourism industry – railroad sight-seeing, marine sight-seeing, charter fishing, and cruise ships – benefit from the port facilities located in Seward. Additionally, the Seward commercial fishing fleet, which targets a diverse range of species including salmon, halibut, sablefish, pacific cod, and rockfish, relies on port facilities and generates a market for local seafood processors and support services. The Vigor Industrial shipyard facilities also attract port users to Seward.

Valdez

Of the Southcentral regional ports, the Port of Valdez is the fourth largest in terms of volume. The City-owned facility offers quick access to the Interior, and plays an important role in Alaska's mining and seafood industry.

Freight Estimates

In 2014, 44,000 tons of freight move through the Port of Valdez, according to data provided by the Port. For 2013 and 2014 combined, about 45 percent of the total tonnage is in-bound and 55 percent out-bound.

COE data for Valdez is substantially incomplete for cargo other than petroleum products, and therefore not reported in this study. However, it is estimated that Valdez captures about two percent of the Southcentral marine freight market. For non-containerized barge traffic this proportion rises to an estimated five percent, and excluding rail barge volume Valdez receives an estimated 10 percent of barge volume.

Port activity is dominated by movement of seafood, mining supplies, construction materials, and one-off oversized or overweight loads. Samson Tug and Barge and Alaska Marine Lines are the port's largest shippers, accounting for approximately 90 percent of the Port's total tonnage in 2014.

Activity at the Port has grown slowly since the mid-1990s, often exhibiting significant year-to-year fluctuations depending on seafood harvests and construction projects. Freight tonnages over the 2012 to 2014 period averaged 44,000 tons, well above the annual average for the previous ten years (2002 to 2011) of about 30,000 tons. Out-bound shipments of salmon are playing an increasingly large role—the 2013 volume of more than 50,000 short tons was due in-part to a record harvest of pink salmon in Prince William Sound.

The port is most active in the summer months when canned and frozen salmon from the local Prince William Sound fisheries are harvested and transported to market in containers. Silver Bay Seafood's expansion in Valdez will likely increase the shipment of fish through the port. Other out-bound shipments include small amounts of scrap metal and sulfur from the local refinery.

In-bound shipments include mining supplies destined for the Pogo Gold Mine. After arrival, they are trucked approximately 300 miles north along the Richardson Highway. Other in-bound freight includes occasional shipments of munitions destined for Alaska military installations, construction materials, and freight destined for the North Slope.

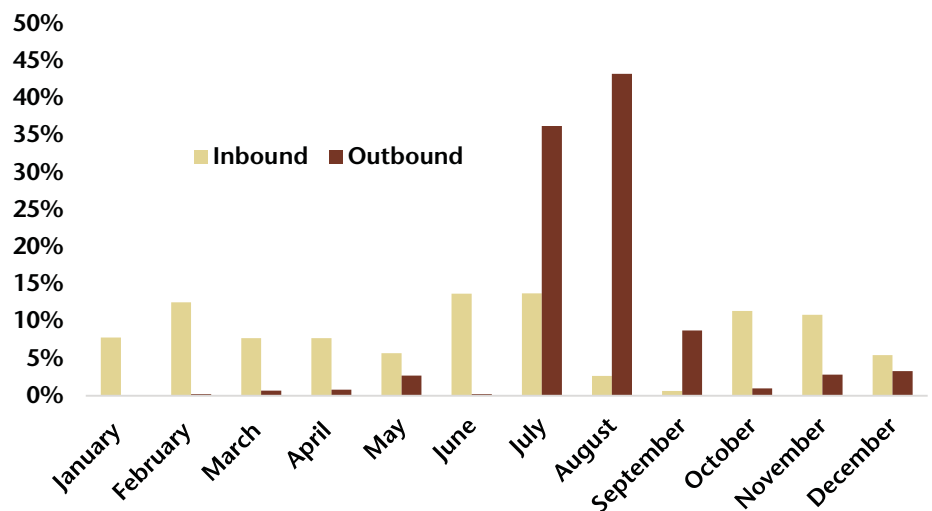
**Port of Valdez Freight Volumes
(1,000s of short tons),
1996 to 2014**

Year	Total Freight
1996	21
1997	20
1998	25
1999	24
2000	23
2001	23
2002	22
2003	34
2004	35
2005	46
2006	24
2007	24
2008	33
2009	27
2010	32
2011	19
2012	38
2013	50
2014	44

Source: City of Valdez, 2015.

The expansion of Silver Bay Seafood's Valdez seafood processing facility has the potential to more than double the amount of reefer containers moving through the port from approximately 450 to more than 1,000 annually. Currently able to process 1 million pounds a day of salmon, the facility will be able to process 2.7 million pounds after expansion.²

Monthly Percent of Total In-bound and Out-bound Freight Movement, Port of Valdez, 2014



Source: Port of Valdez, 2015.

Summary

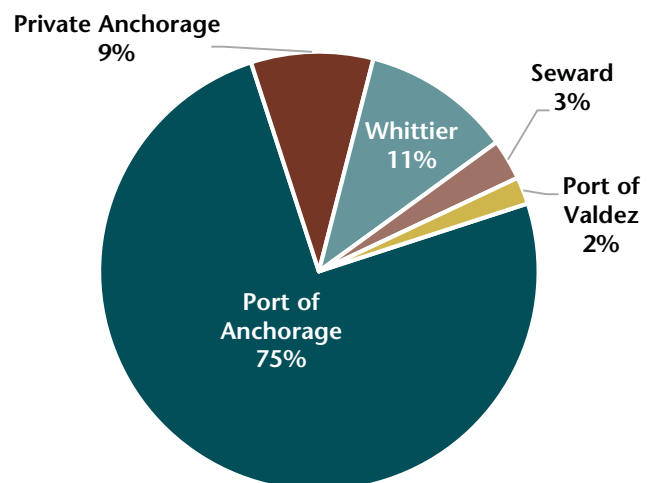
With frequent, regular container and roll-on/roll off ship service, Anchorage dominates the regional marine freight market, capturing 84 percent of total in-bound and out-bound non-petroleum marine freight, based on 2013 data. Of this regional total, the Port of Anchorage accounts for 75 percent and adjacent private operated barge landings account for about 9 percent.

Whittier, with regular rail barge service, captures 11 percent of total regional in-bound and out-bound freight traffic. Seward accounts for approximately 3 percent and Valdez approximately 2 percent.

Other Southcentral ports, including Homer and Port MacKenzie, generally account for small and occasional tonnages of freight. These market share numbers are approximate, and vary year-to-year depending on fish shipments and other factors.

The Southcentral and Interior freight markets also include a significant volume of freight trucked to and from Alaska via the Alaska Highway. It is estimated as much as 10 percent of the general surface freight shipped into Alaska arrives via truck. The Alaska DOTPF has measured annual average daily traffic (AADT) for commercial

Estimated Proportion of Regional Freight Volume, 2013



Source: Corps of Engineers, 2013; McDowell Group estimates, 2015.

² Personal Communication, Richard Riggs, Silver Bay Seafoods, 8/12/2015.

vehicles on the Alaska Highway at a point 76 miles from the U.S./Canada border at about 50 commercial vehicles. That means average one-way daily traffic of approximately 25 trucks. Assuming each truck is carrying about 20 tons of freight, approximately 200,000 tons of freight move into Alaska each year over the highway. This estimate supports the assertion that approximately 10 percent of surface freight shipped into Alaska arrives in Alaska over the highway.

Southcentral Port Infrastructure Inventory

This chapter profiles the physical and infrastructure characteristics of Southcentral ports. Additional information on markets served by these ports is also provided in this chapter. This information is useful in understanding Valdez's competitive position in the regional marine freight market.

Anchorage

Infrastructure

PORT OF ANCHORAGE

POA has a draft depth of -35 feet mean lower low water (MLLW), a cargo wharf extending 2,100 feet, and two wharfs for petroleum tankers each with a length of 600 feet. It lies on 220 acres of land with 90 acres leased to long-term users and has ample open storage space and 27,000 square feet of heated storage and office space. The cargo dock has two 30-ton and one 40-ton electric cranes mounted on rails and, for container ships, supports either roll-on/roll-off (TOTE) or lift-on/lift-off (Horizon Line) vessels. Because of its relationship with nearby military installations, the POA is designated by the Department of Defense as a Nationally Strategic Seaport.



Source: Map Data ©Google 2015.

Of Southcentral port facilities, the POA is the only one that efficiently meets TOTE's roll-on/roll-off system; other facilities either cannot work with roll-on/roll-off at all or cannot handle all three ramps that TOTE uses to load and off-load. In addition, POA is the only port in Southcentral Alaska capable of receiving cement in loose

bulk form rather than packaged. Over 80 percent of cement used in the state comes through here. Additional infrastructure includes a bulk petroleum valve yard with petroleum storage tanks and connections to highway and local pipeline distribution. Petroleum enters the Port not only over the docks but also through a pipeline connected to Tesoro Corporation's Nikiski refinery. The port serves as a gathering station before distribution over the highway or through pipelines connected to Joint Base Elmendorf-Richardson and Ted Stevens Anchorage International Airport. Flint Hills Resources, Tesoro Corporation, The Aircraft Service International Group, and Crowley each have petroleum storage facilities on POA land.

The main factors contributing to a recent increase in port activity include changes in Alaska petroleum refinery capacity and port disruptions on the West Coast, according to POA officials.

The closure of Flint Hills Resources' North Pole refinery, as well as maintenance activities at Tesoro's Nikiski refinery, resulted in reduced in-state refined products capacity, leading to an increase in shipments of petroleum products through the Port. Additionally, a labor dispute in West Coast ports caused congestion which resulted in increased air shipments as companies tried to avoid supply-chain disruptions. This increase in air traffic resulted in higher demand for jet fuel at the Anchorage International Airport, contributing to increased petroleum shipments at the Port.

NORTH STAR TERMINAL & STEVEDORE CO.

The North Star facility receives barges with containerized or break-bulk cargo. Throughout the year, the facility receives multiple shipments of lumber, and, in the summer months, sends out construction equipment to rural areas of the state. Additional shipments include one-time contract barges for industrial or construction projects. Compared to the POA and AML docks, North Star's business has a higher proportion of one-time contract barges and lower proportion of regularly scheduled deliveries.

Because of the significant tidal action in Cook Inlet, barges go dry at low tide. The facility offers three 300-ton cranes and a large fleet of other smaller cranes, forklifts, loaders, dozers, and scrap handlers for maneuvering cargo. North Star's property includes a 376 foot wharf and 22 acres of land.

ALASKA MARINE LINES/NORTHLAND SERVICES

The Northland Services facility (owned by AML) receives barges with containerized or break-bulk cargo. During the ice-free season, AML ships a barge once a week to its Anchorage terminal.

Future Projects/Outlook

The most significant project affecting the future of the port facilities in Anchorage is the POA Expansion Project. This project aims to increase port draft from -35 feet MLLW to -45 feet MLLW, lengthen the dock face, and provide more upland area. Cranes with longer reach will be installed to accommodate larger container ships. Additionally, facilities will be strengthened to withstand earthquakes.

Private sector investment at the Port will increase both refined products and cement storage capacity. Delta Western is constructing a 360,000 barrel storage facility for refined petroleum products, including methanol for use on the North Slope, and Crowley plans to increase jet fuel storage capacity in support of military operations in the Pacific Theater of Operations. These additions will increase the Port's refined petroleum storage capacity to more than 3.2 million barrels. Alaska Basic Industries is tripling storage capacity of cement with the addition of a 40,000 ton facility.

Competitive Position

Marine ports in Anchorage have immediate access to the state's rail and highway networks and largest airport. This positions the town as a transportation hub for much of the state. The nearby military installations and Ted Stevens Anchorage International Airport, the fifth largest air cargo hubs in the world, provide another market advantage. Anchorage is well-suited to meet the local demand for jet fuel from these entities due to the proximity of Tesoro's Nikiski refinery and the pipelines and storage facilities already in place, enabling the reception and distribution of high volumes of petroleum products.

On the other hand, there are some drawbacks from the port facilities' geographic location. When compared to other Southcentral ports, Anchorage requires longer vessel transit times and does not remain ice-free year-round. Additionally, traffic congestion on roads within and surrounding Anchorage can slow transshipment of freight by truck.

Seward

Infrastructure

Seward has two primary port facilities, one owned by the ARRC and the other owned and operated by the City of Seward. The port and nearby Resurrection Bay are ice-free year-round. Dock facilities have direct access to the state's highway and rail networks. Although not centered within as large a population base as some other Southcentral ports, the Port of Seward is located 125 highway miles from Anchorage, and well-situated to distribute goods throughout the Kenai Peninsula.



Source: City of Seward.

The City of Seward's small boat harbor supports recreation interests, tour boats, charter fishing businesses, and a diverse commercial fishing industry. The harbor is home to 12 tour boats and over 100 charter boats. Long-liners, purse-seiners, and gill-netters make up the local commercial fishing fleet that targets a wide variety of seafood species. The small boat harbor has a draft depth of -12.5 feet MLLW and offers several low capacity hydraulic derricks intended primarily for unloading seafood from commercial fishing vessels.

The City of Seward's marine holdings also include the Seward Marine Industrial Center (SMIC), located across Resurrection Bay and six miles from the City of Seward. On leased land within SMIC, Vigor Industrial owns and operates a full-service shipyard for vessel repair and maintenance. The shipyard serves the fishing, marine transportation, and oil and gas industries, and intends to play a role in Arctic drilling maritime operations. Vigor's full-service shipyard sits on 11 acres of SMIC land with 35,000 square feet of covered work area. Operations equipment includes a 5,000-ton Synchrolift, 250-ton Travelift, and two 80-ton cranes. SMIC sits on 15 square miles with its basin at a depth of -21 feet MLLW. It's North Dock has a depth of -25 feet MLLW.

Seward's port facilities offer potable water, power utilities, used oil disposal, garbage service, battery disposal service, fueling, sewage pump service, hardware stores, grocery stores, restaurants, and hotels. Other local support infrastructure includes three seafood processors, Seward Fisheries, Polar Seafood, and



Source: Alaska Railroad Corporation.

Resurrection Bay Seafoods, which process the catch of the commercial fishing fleet. Additionally, the port is in close road proximity to a large concentration of businesses and resources in Anchorage and the Kenai Peninsula.

ALASKA RAILROAD TERMINAL

The primary cargo port facilities in Seward are those owned by ARRC. In recent years over 2 million tons of cargo pass over ARRC docks annually, much of which was coal produced by Usibelli's mine in Interior Alaska.³ The coal is shipped south from the mine in Healy by rail and exported through Seward to foreign destinations. Other shipments include regular barge service run by Samson Tug and Barge that deliver containerized or break-bulk goods once every two weeks and contract barges that deliver cargo such as construction materials on an as-needed basis. Through its direct connection to rail and highway networks, the facility is capable of shipping throughout the entire state. Beyond cargo, the port serves as a tourist hub, receiving cruise ships seasonally and over 130,000 cruise passengers annually.⁴



Source: Alaska Railroad Corporation.

ARRC owns 328 acres of land in Seward, including 75 acres for dock facilities and the rest for upland area supporting dock operations such as storage. Three docks serve different purposes:

- *Seward Loading Facility* deals exclusively in the loading of bulk commodities, primarily coal but also gravel, from rail cars into bulk cargo vessels. It includes a tower crane that moves material with a conveyor system.
- *Passenger Dock* supports passenger operations. It sits at depth of -35 feet MLLW, has two sides each 736 feet in length, and allows two cruise ships to moor at a time. The Passenger Dock can be used for cargo operations but only when a passenger ship is not in port, which limits its cargo activity during the tourist season.
- *Freight Dock* serves cargo operations beyond bulk goods. It has a land area of approximately 5.3 acres, dock face length of 550 feet, draft depth of -35 feet MLLW, and support equipment including a 150 ton crane. Although the dock has roll-on/roll-off capabilities, due to a relatively narrow width and land area, the dock is not compatible with the roll-on/roll-off specifications of large vessels such as TOTE's container vessels. This is significant as TOTE has designated the Seward port as its emergency contingency berth.

Future Projects/Outlook

In 2014, the U.S. Department of Transportation awarded ARRC a \$2.5 million Transportation Investment Generating Economic Recovery (TIGER) grant to study expansion of its Seward Marine Terminal. The expansion,

³ Alaska Railroad Corporation Seward Terminal Reserve, Dock Facilities Master Plan, 2014

⁴ Ibid.

which is focused on the Freight Dock, calls for an extension of the dock by 400 feet and widening of the dock to 320 feet along its entire length. The east side of the dock, which faces constant sediment deposition, is to be dredged, and upland areas not immediately adjacent to the water are to be further developed to support operations. With these improvements, the Railroad intends to increase loading and unloading safety, expand space for simultaneous loading or unloading, enhance roll-on/roll-off capabilities, and allow for larger and more ships to berth.

In 2009, the City of Seward applied for, but was not awarded, a \$16.9 million TIGER grant for improvements to its SMIC facilities. Improvements, such as a wave barrier, additional moorage space, and upland improvements, are planned but not underway. Seward has a particular interest in attracting vessels in the Community Development Quota (CDQ) fishing fleet to homeport in Seward.

Whittier

Infrastructure

The Port of Whittier is ice-free year-round. Local port facilities are owned by either ARRC or the City of Whittier. The community of Whittier does not generate a large demand for freight transportation; rather, port facilities serve as a coastal hub for transshipment of goods to elsewhere in the state by highway, rail, or water.

Anchorage is 60 highway or rail miles from Whittier. Barges take about a week to travel from Puget Sound to Whittier and five days to travel from Prince Rupert, British Columbia – less time than they take to reach Anchorage.



Source: City of Whittier.

The Port of Whittier offers limited access to amenities such as groceries and hotels. Local Whittier businesses provide marine fuel, marine repair, welding, dry boat storage, and other storage services. Gaps in the amenities and services available in Whittier can be supplemented by the services and businesses of nearby Anchorage.

Whittier hosts a commercial fishing fleet that fishes the waters of Prince William Sound, primarily for salmon but also for species such as shrimp and halibut. A fish processing plant in Whittier, owned by Great Pacific Seafoods, Inc., processes the fleet's catch.

ALASKA RAILROAD DOCK

The ARRC facility primarily deals with freight shipments. It receives shipments of containerized or break-bulk goods from rail barges, either Alaska Rail Marine System (ARMS) barges operated by Alaska Marine Lines or CN Aquatrain barges operated by Foss Maritime. These barges have rails on their deck which allow for rail cars to be transferred directly between the barge and rail tracks. Approximately 30 containers can be transported on the CN barge and 40 on the AML barge.

Barge shipments originating in Seattle and Prince Rupert run year-round. An ARMS barge leaves Harbor Island in Seattle once a week and arrives in Whittier about a week later. An Aquatrain barge leaves Prince Rupert about once every 11 days and arrives in Whittier five days later. From Whittier, most goods travel by rail or highway to destinations along the Railbelt, and some continue even further to the North Slope. Other goods are reshipped by water to the nearby coastal communities of Valdez and Cordova, as well as other coastal locations.

In addition to barge freight traffic, ARRC facilities support the commercial fishing and tourism industries. ARRC allows commercial fishing tenders to offload and day-cruise ships carrying fewer than 150 people to moor at its facilities.

ARRC's Whittier dock has a depth of -35 feet MLLW and a length totaling 350 feet. The facilities reside on 230 acres of land. Rail tracks run all the way to the dock and allow railcars to be transferred directly between barges and rail. Forklifts are available to move containers. For freight traffic, the railroad's facilities are only capable of receiving barges; they cannot receive container vessels. Currently unused, the Railroad also has a 1,200' dock that would require improvements before active duty.

ARRC officials mentioned two factors they have to consider when moving freight through Whittier: the width of the tunnel and length of trains they can bring through the town.

WHITTIER HARBOR

The City of Whittier's harbor serves recreation, day-cruise tour, charter, and commercial fishing vessels. The Harbor has a depth of -15 feet MLLW and possesses 350 slips, the largest of which accommodate boats as long as 54 feet. Berthing space is fully occupied and in high demand with a five to seven year wait time to gain a berth. Facilities include two boat launch ramps, two maintenance grids, and a fuel service depot. Additionally, a crane, boom, and net are available for commercial fishing fleet unloading.

The Alaska Marine Highway System (AMHS) provides service to Whittier year-round. The cruise ship terminal owned by Whittier Dock Enterprises LLC, operates on a seasonal basis and accommodates one cruise ship at a time.

Future Projects/Outlook

Due to increased demand of the Whittier small boat harbor, the City of Whittier plans to improve the existing harbor and construct a new harbor. Additional plans call to improve navigation through Passage Canal, the body of water leading to Whittier.

In the event of construction of a natural gas pipeline, it is expected Whittier would play a significant role supplying the project with pipe, machinery, and other supplies. The Railroad has a 1,200' dock currently unused that could be used to support operations.

Port of Valdez

Infrastructure

The Port of Valdez owns the Valdez Container Terminal, John Thomas Kelsey Municipal Dock, and Valdez Grain Terminal. The port remains ice-free year-round. The state's highway network connects Valdez with the rest of the state. Private port facilities have developed to support the export of crude oil from the terminus of the 800-mile Trans Alaska Pipeline System (TAPS). Public facilities support commercial fishing, tourism, and recreation.



Source: City of Valdez.

The Valdez Container Terminal handles containerized cargo, and allows for loading and unloading through both roll-on/roll-off and lift-on/lift-off technologies. The dock extends for 700 feet, with two dolphins allowing for a length of up to 1,200 feet, at a depth of -50 feet MLLW. Infrastructure for loading and unloading includes a 140-ton crane and multiple diesel forklifts. The 21-acre uplands yard has lighting, electrical plug-ins for reefer containers and a 60-ton scale. Adjacent to the Container Terminal is an unused grain terminal with a capacity of 522,000 bushels in nine concrete silos, each of which are 112 feet tall.

Other maritime infrastructure in Valdez include a dock used by AMHS, and a small boat harbor which has 511 slips, three launch ramps, wash-down area, and six maintenance pads with water and power. A 75-ton Travelift, 2 cranes, tidal grid, and fish pump support larger recreational and commercial fishing vessels. Currently under construction, a new harbor will alleviate harbor congestion with the addition of slips for vessels 36 feet to 100 feet.



Source: City of Valdez.

Located closer to the city, a wide variety of vessels use the John Thomas Kelsey Municipal Dock, including oil and gas, commercial fishing, towing, tourism, and recreation. The 600 foot wooden dock is open to the public and adjacent to the Kelsey Plaza which can be rented for parties or festivals. In the summer, recreational fishing takes place at the dock. The dock is lighted and water is available. Water depth is -35 feet MLLW. A nearby fuel dock provides fuel and lubricants to vessels and facilitates export of refined petroleum products, mainly ultra-low sulfur diesel, from the

Petro Star refinery in Valdez. Trucks bring products from the refinery to a tank farm connected to the dock. Refined products are loaded onto fuel barges destined for Anchorage, Homer, Dutch Harbor, and other ports.

Other Ports Serving Southcentral and Interior Alaska Markets

In addition to Anchorage, Seward, Whittier and Valdez, a number of smaller ports interact, or could potentially interact, with the Southcentral freight market. With relatively small amounts of freight volume, no data is publically available detailing port activity.

Port MacKenzie

Facilities at Port MacKenzie are owned by the Matanuska-Susitna Borough. The dock is situated on the west side of Cook Inlet, 86 miles by paved road from Anchorage. It is 38 miles from Wasilla and the quickly-growing Matanuska Valley population.

Port MacKenzie is designed to transport industrial and bulk resources, specifically natural resources, but is capable of moving a broader variety of goods. Examples of cargo that have transited the port include gravel, coal, wood chips, cement, logs, modular homes, heavy equipment, and oil field modules. The port does not have regularly scheduled shipments. Instead, shipments arrive on as-needed basis for specific projects.



Source: Map Data ©Google 2015.

Port MacKenzie lies on 9,033 acres of land, most of which is available for future commercial and industrial development. A 7,000 square-foot terminal sits on-site and, with office space and utilities, is available for lease. Two docks of varying capabilities comprise the Port's facilities. The Barge Dock has a 500-foot bulkhead, a depth of -20 feet MLLW, and 14.7 acres available for temporary storage. The Deep Water Dock has a face of 1,200 feet, a depth of -60 feet MLLW, and a five-foot wide conveyor system capable of moving 2,000 tons of bulk goods per hour. Two cranes with capacities of 230 and 100 tons are onsite and available for lease.

Amenities and support services are limited at the Port. Lodging, food, and groceries are available in nearby Wasilla and Big Lake. Shippers are responsible for procuring the labor necessary to load and unload goods, although one of the few businesses located at the port, NPI LLC, offers off-loading assistance. Available at the dock are electric power, fuel service, waste oil disposal, and garbage disposal.

For Interior Alaska, the port offers the closest access to the ocean. With this proximity, Port MacKenzie is well situated to export natural resources from the Interior, as well as to bring north fuel and natural gas. This would be especially the case if the Port were connected to the existing rail network.

Port MacKenzie's operations are hindered by accessibility. Much of its future expansion depends on a planned rail connection, a 32-mile spur branching off from the main line near Houston. This spur connection will improve the Port's accessibility to natural resource markets of Interior Alaska. Complementing the rail spur are

plans to construct a rail-loading facility at the dock. Additional future projects include the construction of a second conveyor system, a fuel tank farm, and, potentially, an LNG plant.

Skagway

Skagway serves as a marine gateway to Yukon Territory, Canada. In the past, Yukon mining operations relied on the Skagway port and a rail line running from Skagway into Canada to relay freight to and from mines. This function faded over time but came online again 2007 and continues today. However, the rail is no longer used to convey freight; instead, freight moves by truck along the highway connecting Skagway with Whitehorse. Rail operations are limited to passenger traffic.

Facilities at the Port of Skagway serve a variety of industry groups. The facilities include the AMHS ferry and barge terminal; White Pass and Yukon Route (WPYR) Railroad's Broadway Dock, Rail Dock, and Ore Dock; AIDEA's ore terminal; AML's container barge dock; and the City of Skagway's small boat harbor.

The State of Alaska and City of Skagway run the AMHS ferry and barge terminal which accepts AMHS ferries and barges year-round. The WPYR Railroad Rail Dock, which extends 1,764 feet at a depth of -35 feet MLLW, is used primarily to receive cruise ships but can also handle cargo. The Railroad also owns the 300-foot long Broadway Dock, used for cruise ships, and the Ore Dock, 1,250 feet in length at a depth of -42 feet MLLW. The Ore Dock was built in 1969 to load mineral concentrates from Yukon mines onto cargo vessels. Today, it still serves that purpose but also receives cruise ships.

Connected to the Ore Dock is the Ore Terminal, owned by the Alaska Industrial Development and Export Authority (AIDEA). Mineral Services Inc. operates the terminal to export copper concentrate from the Minto Project mine, and in 2014 shipped out over 60,000 tons of copper concentrate. The terminal lies on a 6.7 acre waterfront lot and consists of over 100,000 square feet of indoor storage, an ore loading tower, and fuel transfer and storage facilities. Annually, the fuel facilities transfer over 30 million gallons of fuel to Skagway and communities further inland. The remaining facilities consist of an AML container barge dock, to which a barge



Source: City of Skagway.

delivers from Seattle weekly, and the City of Skagway's small boat harbor which provides berths for recreational, commercial, and fishing vessels.

Future development hinges on activity in the mining industry. Increased exploration and production will drive a greater demand for export capacity and fuel expansion at the Skagway port.

Expansion would increase storage capacity and create additional berthing capacity. The City of Skagway and AIDEA have sought TIGER grant funds for port improvements.

Haines

Port of Haines facilities serve freight transportation, the cruise industry, the commercial fishing industry, commercial vessel operations, and recreational boaters. Although connected to the state's highway system, Haines is isolated at a terminus of the system and remote from other significant population centers along the highway.



Source: Map Data ©Google 2015.

Port facilities include numerous properties owned by Haines Borough, an AMHS terminal, and private operations. The Haines Borough operates two small boat harbors: Portage Cove with 114 slips and capable of mooring boats up to 40 feet in length, and Lentikof Cove which is open seasonally and, in the past, has issued about 40 permits for seasonal use. Both harbors serve and support commercial vessels, recreational vessels, and commercial fishing vessels. The Haines Borough also owns the cruise ship terminal called Port Chilkoot Dock and, in conjunction with the State of Alaska, the Lutak Dock. The Lutak Dock accepts petroleum products, which are stored in on-site storage tanks, and containerized cargo. AML delivers here once a week. The dock extends for 1,051 feet at a depth of -36 feet MLLW and lies adjacent to a six acre staging area. Adjacent to the Lutak Dock lies the AMHS terminal. Private facilities include the Chilkoot Lumber Company Dock, which accepts containerized shipments and seafood, and the Haines Packing Company Dock, a fish processing company.

Assessments for future port development have considered the construction of a railroad linking Haines with Yukon Territory's mineral production projection to aid in delivering minerals to market. The cost of rail construction makes this an unlikely prospect.

Homer

The City of Homer lies at the end of the highway system on the southern end of the Kenai Peninsula. The community is connected by road to Anchorage, but lies further away than Seward and Whittier and is not part of the state's rail system.



Source: Map Data ©Google 2015.

The Homer port is ice-free year-round. Port facilities include the City of Homer's small boat harbor, Fish Dock, Pioneer Dock, and Deep Water Dock. The small boat harbor hosts 1,000 stalls capable of mooring boats up to

75 feet in length. Research, fishing, commercial, and recreational vessels all rely on the harbor. The nearby Fish Dock supports the commercial fishing fleet with several 2.5 and 5 ton cranes for unloading seafood. Homer possesses cold storage for preserving seafood but minimal capacity for processing. Located on the southern end of the Homer Spit, the Pioneer Dock accommodates larger vessels such as Coast Guard vessels, AMHS ferries, and barges. It has a length of 469 feet and depth of -40 feet MLLW and allows for roll-on/roll-off container transport for barges. The Deep Water Dock is designed to meet the needs of even larger vessels such as Pollock trawlers and cruise ships. The Deep Water Dock has a length of 345 feet and depth of -40 feet MLLW. Future development plans aim to equip the Deep Water Dock with the ability to handle containerized freight.

Competitive Analysis

In this chapter the various factors that affect port competitiveness are considered, including stevedoring services, distances from customers and markets, costs of competing freight transportation modes, and other factors.

Stevedoring Services

Stevedoring services at port facilities include line handling, unloading and loading of freight from vessels and trucks, and other manual labor. Two main models exist for the provision of stevedoring services in port facilities: an “open” arrangement or an “exclusive” arrangement.

The “open” model allows any company to provide stevedoring services at a port, as long as they adhere to rules set by the port. In this model, companies active in marine transportation, salvage, or other maritime activity can also become “approved” stevedores which reduces the need to call upon specialized stevedore companies. In many cases this makes economic sense—instead of hiring a stevedoring company, employees already present can perform the needed work. The Port of Anchorage, ARRC-owned Seward and Whittier terminals, Port of Homer, and Port of Haines follow this model. Private facilities such as the Northland Dock in Anchorage provide their own stevedoring services.

Unique to the Southcentral region, the “exclusive” model followed by the Port of Valdez requires all vessels to use a single stevedoring company. The North Star Terminal & Stevedore Co. makes annual payments to the City of Valdez for its 5-year exclusive permit; their current permit expires in 2016.

This arrangement may have both positive and negative elements, from a port user perspective. One advantage for relatively low-volume ports of an exclusive arrangement is that it pushes all business to one stevedoring services company, who then operates with an economy of scale to support reliable, quality service. To the extent that an exclusive stevedoring services contract reduces costs and/or simply logistics for businesses active in the port, it has the potential to increase the attractiveness of the port from shipping and other companies.

An exclusive stevedoring services arrangement may be less attractive to higher volume shippers, who use the dock with enough frequency and volume that mobilizing their own crews to load and unload vessels could be a lower cost option.

Stevedoring services costs are one part of the overall cost equation that shippers consider when selecting ports and modes. Proximity to the customer can override higher handling costs at the dock, especially for one-off shipments, such as the Tanana bridge sections, but also for routine transport of freight such as that moved to Pogo Gold Mine.

Alternatively, port customers with regular shipments to Interior Alaska or elsewhere will be more likely to consider other ports if stevedoring service costs are lower. If handling costs in Seward, Whittier, or Anchorage are lower, the exclusive arrangement could place Valdez at a competitive disadvantage. However, stevedoring

costs are not likely to be the deciding factor for a shipper looking to establish a presence in a port, or significantly scale-up activity in a port it already uses.

Trucking Services

With no access to rail transportation, freight brought into the Port of Valdez is either used locally or transshipped by truck, mainly to the Interior. Depending on the type of load and destination, trucking freight from Valdez can be more expensive than from other Southcentral ports. A variety of factors influence this dynamic, including:

- *Quality of the road.* Compared to the Parks Highway, the Richardson and Glenn highways are less developed from a trucking perspective. There are fewer pull-offs and passing lanes, and a higher number of corners requiring slower speeds. In addition, these routes are plowed less often in the winter.
- *Cannot pull double trailers on the Glenn Highway.* In contrast to the Parks and Richardson highways, the current condition of the Glenn Highway does not allow truckers to pull double trailers. This results in higher costs to trucking companies as they are prevented from realizing the efficiencies associated with pulling doubles.
- *Lower volume of trucking traffic.* Compared to the Parks Highway, the Richardson Highway receives much less truck traffic. Lower volumes typically means fewer providers and less opportunities for economies of scale for truckers already active in the corridor. Related to that, with lower volumes along the Richardson, trucking companies have less opportunity to haul doubles, further increasing prices.
- *Differences in port policies.* Because of Valdez's exclusive use arrangement, shippers are prevented from completing certain tasks (e.g., unloading/loading truck trailers) while operating within the Port of Valdez, increasing the total cost of moving freight in Valdez. This may increase transportation costs paid by freight customers.

Distances by Highway Miles between Cities

↔	Valdez	Seward	Anchorage	Fairbanks	Deadhorse	Haines	Skagway
Valdez	-	423	299	363	857	691	747
Seward	423	-	127	483	976	880	936
Anchorage	299	127	-	359	852	756	812
Fairbanks	363	483	359	-	495	640	696
Deadhorse	857	976	852	495	-	1,134	1,190
Haines	691	880	756	640	1,134	-	352
Skagway	747	936	812	696	1,190	352	-

Source: Google Maps, 2015.

Distance to key consumer markets is the key factor limiting the volume of freight trucked out of Valdez. Anchorage, Kenai Peninsula, and Mat-Su (together accounting for 60 percent of Alaska's population) are all much more conveniently and efficiently served out of port facilities in Anchorage. Fairbanks is equidistant from

Valdez, but high-volume steamship container and roll-on/roll-off service to Anchorage provides an economy of scale through the Port of Anchorage that Valdez is unlikely to ever match. One area of concern to truckers, however, is the traffic volume and number of traffic lights along the Glenn and Parks Highway (particularly through Anchorage and Wasilla) that can slow delivery times.

Trucking Traffic

The Richardson Highway, extending from Valdez to Fairbanks, is less traveled than the Parks Highway, which runs from Anchorage to Fairbanks and is an alternative route for shipments to the Interior. In 2014, the Richardson was traveled by a daily average of 300 to 450 vehicles, of which roughly 30 were commercial vehicles. (The exact number depends on where along the highway the measurement was taken.) In comparison, the Parks Highway experienced daily average traffic of more than 1,000 vehicles, of which an estimated 110 were commercial vehicles.

Daily average traffic on the Glenn Highway, connecting Anchorage with Glennallen, totaled 815 vehicles with approximately 60 commercial vehicles. The Alaska Highway, measured close to the U.S./Canadian border, averaged 333 vehicles daily, of which approximately 50 were commercial vehicles.

Annual Average Daily Traffic and Estimated Commercial Truck Traffic on Select Alaska Highways, 2014

Highway	Milepost	Average Annual Daily Traffic	Estimated Proportion of Commercial Trucks	Estimated Total Daily Commercial Truck Traffic
Parks	240	1,039	11%	109
Glenn	132	815	7%	60
Richardson	66	420	8%	34
Alaska	76	333	14%	47
Richardson	221	326	9%	30

Source: Alaska DOTPF, 2015; McDowell Group estimates.

Oversized and Overweight Truck Traffic

The number of oversized and overweight permits originating within a community is a proxy for heavy truck traffic. Data from the Alaska DOTPF identify Anchorage as the main originator of this type of truck traffic. It is also noted that many of these permits do not originate from ports; it is expected that a significant proportion of oversize and overweight permits — especially those originating in Valdez, Seward, and Whittier — likely result from the movements of boats.

Oversize and Overweight Permits Issued between Destinations, FY2012 to FY2014

Origination-Destination	FY2012	FY2013	FY2014
Valdez	131	244	185
To Fairbanks	101	77	69
To North Pole	8	29	12
To Salcha	4	115	25
To Delta Junction	4	5	14
To Prudhoe Bay	13	18	65
To Deadhorse	1	0	0
Anchorage	774	1,019	1,094
To Fairbanks	338	343	367
To North Pole	53	19	16
To Salcha	2	10	4
To Healy	31	21	22
To Prudhoe Bay	204	586	629
To Deadhorse	146	40	56
Seward	152	154	139
To Anchorage	145	143	134
To Fairbanks	6	8	3
To North Pole	0	3	0
To Salcha	0	0	0
To Healy	1	0	0
To Prudhoe Bay	0	0	2
To Deadhorse	0	0	0
Whittier	189	196	205
To Anchorage	188	196	203
To Fairbanks	1	0	1
To North Pole	0	0	0
To Salcha	0	0	0
To Healy	0	0	0
To Prudhoe Bay	0	0	1
To Deadhorse	0	0	0

Source: Alaska DOTPF, 2015.

Estimated Trucking Rates

Quotes were obtained from industry contacts, including formal quotes from Carlile Logistics and Lynden Transportation for the movement of a 40-foot container with 40,000 lbs. of freight in Alaska. It is expected actual rates would be lower after negotiations with a trucking company and if a customer was committing to multiple or regular shipments. The cheapest route (by highway mile) is between Anchorage and Fairbanks.⁵

⁵ The reader is cautioned against placing significant emphasis on the cost per pound figure in Table XX. The impact of weight on price is non-linear. That is, a shipment weighing 20,000 lbs. may cost the same as a 40,000 lbs. shipment. Trucking companies consider a number of factors to arrive at a price offered to customers including volume, weight, distance, and type of freight.

Estimated Trucking Costs of a 40-foot Container Containing Steel, 2015

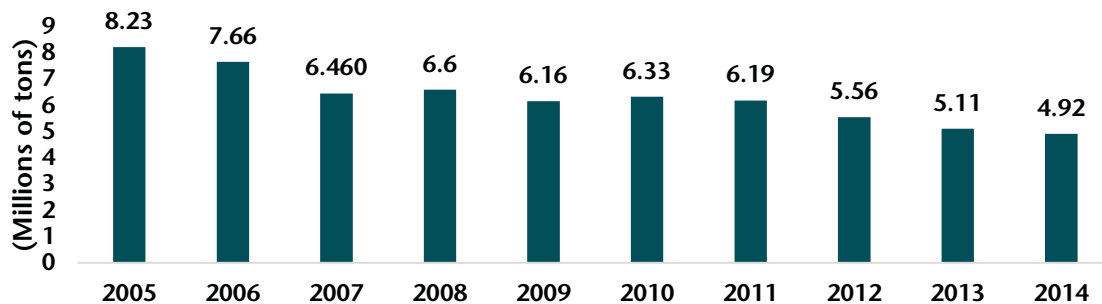
Origination-Destination	Average (\$)	Distance (miles)	Cost (\$)/Mile	Cost (¢)/Pound
Anchorage				
To Fairbanks	\$1,725	350	\$4.93	¢4.3
To Prudhoe Bay	6,625	850	7.79	16.6
To Valdez	2,350	300	7.83	5.9
Valdez				
To Fairbanks	2,925	360	8.13	7.3
To Prudhoe Bay	8,575	860	9.97	21.4
To Anchorage	2,350	300	7.83	5.9

Note: Quote was for a non-refrigerated, full 40-foot container weighing 40,000 pounds. All prices include a 23 percent fuel surcharge. Source: Carlisle Logistics, 2015; Lynden Transportation, 2015; McDowell Group estimates, 2015.

Railroad

ARRC offers service throughout Southcentral, extending from Seward to Salcha. The railroad moves significant quantities of coal, gravel, refined petroleum products, and other freight that is not time-sensitive or perishable. Over the last decade, freight tonnage carried by rail has fallen approximately 40 percent, from more than 8.2 million tons in 2005 to approximately 4.9 million tons in 2014. Reduced coal exports (from Usibelli Coal Mine) and refined products (from the recently closed Flint Hills Refinery) shipments are a couple of the main reasons explaining this reduction.

Total Freight Tonnage Transported by the Alaska Railroad (millions of tons), 2005 to 2014



Source: ARRC, 2014 Annual Report.

Sample ARRC Rates

Rates paid by railroad customers vary according to distance traveled, destination, current fuel prices, and type of freight. The following calculations allow some comparison with trucking rate estimates previously addressed.

Alaska Railroad Estimated Rate for Iron and Steel between Anchorage and Fairbanks

	100,000 (lbs.)	120,000 (lbs.)	140,000 (lbs.)	160,000 (lbs.)
Rate per 100 pounds	\$4.02	\$3.68	\$3.29	\$2.93
Total Cost	\$4,090	\$4,486	\$4,676	\$4,758
Cost (\$)/Mile	\$11.69	\$12.82	\$13.36	\$13.59
Cost (¢)/Pound	4.1¢	3.7¢	3.3¢	3.0¢

Note: Estimates included a \$0.20 per mile fuel surcharge.
Source: ARRC Freight Tariff, 2015.

Railroad/Trucking Competition

While trucking companies and ARRC compete for some freight movements, each is well suited for different types of cargo. Rail transportation is competitive for heavy and regular shipments such as transportation of gravel from Palmer to Anchorage, coal from Healy to Seward, or refined products to the Interior. A single railcar regularly carries 100,000 to 160,000 pounds of freight at a time with heavier loads possible. In comparison, a 40' container can carry up to 60,000 pounds.

Trucking is quicker, easier to deploy, and better suited for smaller loads. This especially true for the movement of perishable foods. A container arriving in POA can be delivered to a grocery store in the Interior in six to seven hours, much faster than timelines available by rail.

Handling costs are a large factor for customers comparing rail versus trucking. While rail may be cheaper from Anchorage to Fairbanks for some shipments, if the cargo needs to be repackaged for trucking upon arrival, trucking the entire distance may be more cost-effective.

While these figures are over-simplified, ARRC's comparative advantage against trucking rates are confirmed for heavy shipments. Note the cost per pound measurement for 100,000 pounds is nearly comparable with trucking rates. As weight is added, the cost relative to trucking falls quickly.

Port Tariffs

Each port facility examined in this report has its own set of charges for use of its docks, infrastructure, and services. These charges are publicly available and detailed in a document typically called the *Port Tariff*. The following section compares Valdez's charges for dockage, wharfage, and other fees with facilities in Anchorage and ARRC-owned facilities in Seward and Whittier.



The Valdez Container Terminal with a bulk carrier being loaded with wood chips.
Source: City of Valdez.

Dockage Fees

Dockage fees are charges for vessels tying up at a port facility for a set amount of time, in this case 24-hours. Charges in Valdez are the lowest relative to both Anchorage and ARRC facilities in Seward and Whittier, but higher in some situations than Port MacKenzie. The cost differential between the Port of Valdez and POA and ARRC-owned facilities will increase through 2019 as these facilities increase their rates approximately 17 percent and 15 percent, respectively.

Estimated Dockage Rates Per Vessel-Foot Per 24-Hours in Southcentral Ports, 2015

Over (feet)	Not Over (feet)	Port of Valdez	ARRC-Owned Seward and Whittier	Port of Anchorage*	Port MacKenzie
0	60	\$1.05			
60	100	\$1.10		\$7.04	
100	200	\$0.75	\$2.90	\$3.51	\$0.60
200	300	\$0.66		\$3.28	
300	351	\$0.73		\$3.21	\$0.80
351	374	\$0.85		\$3.15	
374	400	\$0.88		\$3.24	\$1.0
400	426	\$0.93		\$3.37	
426	449	\$0.96		\$3.54	
449	475	\$0.98	\$4.15	\$3.61	
475	498	\$1.03		\$3.77	
498	524	\$1.11		\$4.06	
524	551	\$1.17		\$4.17	
551	574	\$1.18		\$4.31	
574	600	\$1.25		\$4.57	
600	626	\$1.37		\$5.02	
626	649	\$1.54		\$5.62	\$1.20
649	675	\$1.68	\$5.20	\$6.15	
675	698	\$1.84		\$6.70	
698	725	\$2.05		\$7.48	
725	751	\$2.26		\$8.25	
751	774	\$2.49		\$9.06	
774	800	\$2.70	\$7.25	\$9.86	
800	849	\$2.92		\$10.81	
849	900	\$3.14	\$8.25	\$11.59	

*Figures for Anchorage assume a vessel length one-half of the category.

Source: ARRC Port Tariff, 2015; Port of Valdez Tariff, 2015; Port of Anchorage Tariff, 2015; Matanuska Susitna Borough, 2015.

Wharfage Fees

Wharfage fees are charged when a customer brings a specific type of freight through a port facility. Valdez is competitive relative to ARRC facilities and POA in all categories examined, but not with Port MacKenzie. For general cargo/not otherwise specified (NOS) (the category of the majority of freight moved through the Port of Valdez), Valdez is 31 percent and 44 percent cheaper than ARRC facilities in Seward and Whittier and the

POA, respectively. Assuming Valdez does not increase its wharfage fees, this differential will increase through 2019 to 40 percent and 53 percent, respectively.

Some facilities have the ability to negotiate reduced rates for regular users. For example, the Port of Valdez has the ability to reduce wharfage charges 20 percent for common carriers calling on the Port 12 times or more per year, non-common carriers calling on the port 24 times in a year, or customers handling in excess of 5,000 short tons annually in the Port.⁶

Wharfage Fees in Southcentral Ports by Category, 2015 to 2019

	General Cargo/NOS (Short Ton)	Fuel (Gallon)	Explosives (Short Ton)	Empty Containers	Minimum Charge
ARRC-owned Seward and Whittier facilities					
2015	\$5.05	\$0.02	-	\$11.5	\$250.0
2016	5.20	0.025	-	12.0	275.0
2017	5.36	0.025	-	12.5	275.0
2018	5.52	0.025	-	13.0	275.0
2019	5.80	0.03	-	14.0	300.0
Port of Valdez					
2015	\$3.50	\$0.01	\$15.0	-*	\$3.50/Short ton
Port of Anchorage					
2015	\$6.24	\$0.013	\$15.60	\$10.40	\$75.00
2016	6.49	0.0135	16.22	10.82	
2017	6.75	0.0141	16.87	11.25	
2018	7.02	0.0146	17.55	11.70	
2019	7.30	0.0152	18.25	12.17	
Port MacKenzie					
2015	\$2.50	-	\$12.00	\$6.00	-

*The Port of Valdez has a \$6.00 charge for trailer parking that may function as a de facto charge for empty containers.
Source: ARRC Port Tariff, 2015; Port of Valdez Tariff, 2015; POA Tariff, 2015; Matanuska Susitna Borough, 2015.

Other Fees

In addition to dockage and wharfage charges, ports generate revenue through a variety of other charges such as per passenger fees, water fees, and security fees. With no passenger fee, and with other ports increasing their passenger fee, Valdez will remain competitive in this category. Similarly, the Port of Valdez charges the least (of the other Southcentral ports examined) for water provided to vessels calling on its port facilities.

⁶ A *common carrier* refers to a company transporting goods for any person or organization.

Passenger and Water Fees in Southcentral Ports, 2015 to 2019

	Per-Passenger Fee	Charge for first 1,000 gallons of water	Marginal cost per 1,000 gallons of water	Hook-up Fee for water
ARRC-owned Facilities Seward and Whittier				
2015	\$9.85	\$13.4	\$13.4	\$160.0
2016	10.10	13.8	13.8	175.0
2017	10.40	14.2	14.2	175.0
2018	10.75	14.6	14.6	200.0
2019	11.25	15.3	15.3	200.0
Port of Valdez				
2015	-	\$3.00	\$3.00	\$45.0
Port of Anchorage				
2015	*\$3.04 to \$4.04	\$78.00	\$5.20	-
2016	\$3.08 to \$4.08	81.00	\$5.40	-
2017	\$3.12 to \$4.12	84.00	\$5.60	-
2018	\$3.17 to \$4.17	87.00	\$5.80	-
2019	\$3.22 to \$4.22	90.00	\$6.00	-
Port MacKenzie				
2015	\$1.00	-	-	-

*POA figures include a \$1.04 passenger security fee.

Note: Port MacKenzie does not offer water to vessels.

Source: ARRC Port Tariff, 2015; Port of Valdez Tariff, 2015; POA Tariff, 2015.

Southcentral ports calculate security fees through a variety of methods including per ton, per hour the vessel is at the dock, per passenger, and per empty container. Excluding minimum charges, the Port of Valdez is cheaper than both ARRC-owned facilities in Seward and Whittier and POA if a customer can unload at a rate of 130 short tons per hour — a rate that is not uncommon. Without a passenger fee, minimum security charge, and other ports increasing their security fees, the Port of Valdez is highly competitive within the security category.

It is important to note that not all port activities require security and some freight types require enhanced security. For example, movement of ammunition (military use) through the Port of Valdez requires more security than shipments of fish in containers.

Security Fees in Southcentral Ports, 2015 to 2019

	Per Ton	Per Hour	Minimum Security Fee	Empty Container Fee	Per Passenger Fee
ARRC-owned Facilities Seward and Whittier					
2015	\$0.50	-	\$250.0	\$2.00	-
2016	0.50	-	250.0	2.20	-
2017	0.55	-	275.0	2.20	-
2018	0.55	-	275.0	2.20	-
2019	0.60	-	300.0	2.30	-
Port of Valdez					
2015	-	\$65 to \$95	-	-	-
Port of Anchorage					
2015	\$1.18	-	-	-	\$1.04
2016	\$1.21	-	-	-	1.08
2017	1.23	-	-	-	1.12
2018	1.26	-	-	-	1.17
2019	1.29	-	-	-	1.22

Note: The Port MacKenzie tariff does not specify security fees.

Source: ARRC Port Tariff, 2015; Port of Valdez Tariff, 2015; POA Tariff, 2015.

Gap Analysis and Recommendations

The analysis and recommendations below are framed around the study questions identified at the outset of the project. The project team drew on experience with Alaska ports, numerous executive interviews conducted for the project, as well as relevant data, research, and other documents to illustrate the strengths and challenges facing the Port of Valdez in its competitive landscape.

Strengths and Challenges

Geographic Location

STRENGTHS

- Port of Valdez offers several important geographic attributes including a natural, ice-free year-round, deep water port that typically has a calm sea state.
- The Port has efficient access to the uncongested Richardson Highway.
- The physical separation between downtown Valdez and the container terminal ability allows for operational efficiency (in some cases) and a high degree of security. Additionally, the lay-down areas directly at the terminal are supplemented by considerable uplands in close proximity to the port.
- Valdez's proximity and access to Interior and North Slope communities, military, Alaska Native Corporations, and other private developers is an asset.
- Valdez is closer than other Southcentral ports to Seattle and other Pacific Northwest ports, saving as much as a day of marine travel time.
- Valdez's established commercial fishing fleet and processors – coupled with air, highway, and marine transportation linkages – is a strategic advantage over other commercial fishing centers.

CHALLENGES

- A significant drawback for Valdez is the physical distance from Alaska's population centers. Approximately 54 percent of the state's population resides in the Anchorage/Mat-Su area, with 75 percent living in the Railbelt region including Fairbanks and the Kenai Peninsula.⁷
- Illustrating how population density translates to freight volume, in 2013 more than 3.4 million tons of cargo moved between Puget Sound and Alaska. Of that, 97 percent was shipped via water.⁸ The vast majority of cargo transited the POA and other Anchorage port facilities, followed by Whittier.

Commercial Shippers Needs and Expectations

STRENGTHS

- The Valdez container dock is regarded as an especially good facility. Interviewees noted the paving, lay-down areas, and lighting. Additionally, the City's significant investment in plug-ins is superior to many other ports.

⁷ American Community Survey, 5-year data, 2013.

⁸ *The Ties That Bind*, McDowell Group, 2015

- Valdez is recognized as ideal for oversize shipments – especially if destined for the Interior or North Slope.
- The City and business community are complimented for being accommodating and easy to work with.
- Many of Valdez current shippers are also moving products through other Southcentral ports, representing an opportunity to possibly shift freight volume to the Port of Valdez.

CHALLENGES

- Shippers are extremely sensitive to cost and time. Several interviewees noted that a few hundred dollars can make the difference in port selection. Adding further rate pressure, there is high degree of rate competition between trucking and rail options in the Railbelt.
- Use of multiple ports illustrate shippers are purposeful in selecting Valdez; however, logistical and price efficiencies could be achieved by concentrating shipments through other southcentral ports. As an example, Pogo Gold Mine ships cement through Anchorage due to the unique capabilities at that dock. Similarly, grinding balls and cyanide destined for Fort Knox and Pogo gold mines are commonly shipped by rail into Fairbanks and then trucked to the mine sites.
- The highway and rail linkages available in other Southcentral ports create transportation efficiencies that are difficult for Valdez to compete with.

Military Needs and Expectations

STRENGTHS

- Easy access between the port, Richardson Highway, and Interior military bases is a competitive advantage.
- Redundancy is especially important for the military given its national security mission. This is one of the strongest selling points for increasing military use of the port. Valdez should maintain regular communications, encourage site visits, and participate in table-top exercises and physical drills when possible.
- Valdez can expect an increase in ammunition shipments as Eielson Air Force Base (AFB) expands. The new F-35s will require about 25 percent more munitions. Additionally, the base anticipates increasing the number of exercises in the future from its current average of three or four annually. Expected growth of 3,000 more personnel on base will also result in more household goods, cars, and families traveling into the state.
- The Joint Pacific Alaska Range Complex (JPARC) is a national training asset, with 65,000 square miles of airspace in Interior Alaska. An estimated 10,000 people train at JPARC annually. The recent completion of the Northern Rail Extension Bridge spanning the Tanana River near Eielson AFB is expected to contribute to increased year-round use of JPARC. The port could represent an important training and logistical asset to compliment JPARC.
- Increased focus on the Arctic by military and civilian leaders is expected to result in increased military presence, infrastructure, and exercises in Alaska.
- Clear AFB will have substantial freight associated with the planned expansion of the long range missile defense system at the Interior Alaska base.

CHALLENGES

- The size of the military operation at Joint Base Elmendorf Richardson (JBER), coupled with the special designation of the adjacent POA as having strategic importance to the Department of Defense, results in Anchorage serving as the primary port for many military shipments.
- A shipment commonly has 75 percent or more of its goods destined for JBER, with the balance of freight bound for Fort Wainwright or Eielson AFB.
- Because of procurement rules, the military must often choose the cheapest method to bring supplies to their operations. This may place Valdez at a competitive disadvantage against a rail-connected port such as Anchorage, Whittier, or Seward.

Competitive Position

STRENGTHS

- Valdez wharfage and dockage rates are competitive, and in most cases less costly, than in other Southcentral ports.
- Compared to other Southcentral ports, Valdez is closer to the entire region along the Richardson Highway and much of the Interior.
- Compared to the Parks Highway, the Richardson Highway is less congested (with fewer traffic lights and stops) which is advantageous from a trucking prospective.

CHALLENGES

- While stevedoring services rates in Valdez are similar to other ports, the “exclusive use” arrangement contrasts to the “open” arrangement in other ports. The arrangement creates efficiencies for some shippers and adds costs to others, depending on their shipping frequency and local capabilities.
- Population growth continues in the Anchorage and Mat-Su regions, further concentrating regional transportation and port infrastructure in these centers.
- Although much smaller than the POA, Seward’s competitive position is strengthening, given the ARRC’s expansion plans, Vigor Industrial’s increased shipyard capabilities, and formal designation by companies like TOTE as a contingency port.
- A developing Port MacKenzie will add capacity to an already competitive freight environment.
- A lack of rail access in Valdez reduces potential transshipping opportunities.
- Valdez is not widely recognized as an access or departure point for supplies entering or exiting Alaska.
- The Port of Valdez has a relatively small number of customers using its facilities. The loss of one or two would represent a significant loss of freight volume.

Opportunities and Recommendations

Potential Partners and Opportunities

REGIONAL NATIVE CORPORATIONS

The Port should coordinate with regional Alaska Native Corporations on land and resource development strategies. Ahtna Corporation and Doyon Limited are particularly strategic for Valdez, given these corporations' proximity to Valdez and wide array of developable resources.

MILITARY

The military represents a unique opportunity for Valdez, given the strategic importance of Alaska in the Pacific Theater and the Arctic, and need for redundancy in military planning and training. The military also coordinates recreational outings for personnel, creating additional economic linkages. The Port, community leaders, and business leaders should further coordinate efforts to educate military leaders and attract commercial activity. The existing relationship, where the military moves munitions inbound, is a foundation for Valdez to expand this relationship.

SHELL EXPLORATION & PRODUCTION COMPANY

Shell's selection of Valdez as a training facility has several contributing factors including the availability of the port, generally calm sea conditions, training facilities on shore, and housing. The ability to house and feed participants at the "man camp" is a competitive strength over other communities under consideration, including Seward and Kodiak; the camp will require replacement or upgrades in the future. Shell has indicated they intend to conduct a similar drilling season in 2016, with continued effort possible after that, which will prolong its use of Valdez port facilities.

COMMERCIAL FISHING INDUSTRY

Valdez is positioned for continued growth in seafood processing with the well-established commercial fishery, recent investment by processors, cold storage capacity, and hatchery growth in Prince William Sound. It is likely this growth will result in increased port activity. Ongoing communication with industry leaders will be essential in this very competitive industry.

EXISTING PORT USERS

Barge lines, trucking companies, and other users of the port should be engaged by the City and Port of Valdez to identify potential areas where growth can occur.

MANUFACTURING SECTOR

Valdez should examine the feasibility of attracting a modular fabrication company. An interviewee noted that thousands of modular facilities have been built in Anchorage and Mat-Su, and then trucked north for a myriad of uses. As an example, Alutiiq Manufacturing Contractors is located at Port MacKenzie. Valdez assets include available uplands and ability for materials to arrive via highway or port. Finished products can be readily shipped or trucked to clients.

UPLAND LAND OWNERS

ARRC owns approximately 80 acres of uplands near the container terminal. It represents an opportunity to explore mutually beneficial lease or sale of the land. Additionally, ARRC officials indicated they are interested in exploring the possibility of importing refined products from the Petro Star Refinery in Valdez through their Seward facility.

Similarly, other upland land owners may have unique ties to industry sectors that could utilize the port.

Marketing Strategies for the Port

Valdez is strongly identified as the terminus of the Trans-Alaska Pipeline System and as an excellent location for fishing and year-round recreation. The community's port capabilities simply do not have the visibility they may warrant. Several strategies are identified below.

PARTNERSHIPS

Importantly, attracting new commercial activity to Valdez is not a task to be undertaken by the Port alone. The Port, other City officials, and community leaders will need to assess which alliances and tactics will be most effective for each target industry.

Local business leader should coordinate regular meetings with the Fairbanks Greater Chamber of Commerce and Fairbanks Economic Development Corporation to identify mutual priorities concerning infrastructure, regional planning, and political leverage.

A key point is the importance of building relationships and knowledge about the port and other community assets early in the planning process – regardless of the industry sector.

MINERAL DEVELOPMENT

Ensure that existing mining operations and companies engaged in exploration and development, such as International Tower Hill Mines (Livengood Project) and Millrock Resources, are aware of Valdez port capabilities and advantages. Similarly, Alaska Native Corporations and other major land owners with mineral resources should be part of community and port outreach efforts.

Two examples from the project team's research underscore the importance of increasing Valdez visibility at events like the Alaska Mining Association annual conference or Cordilleran Roundup in Vancouver, British Columbia. KPMG's recent assessment of port infrastructure to support anticipated Yukon mineral development included Haines and Skagway as primary ports, with Anchorage, Whittier, Port MacKenzie, and British Columbia ports as alternatives. Similarly, an Alaskan developer recently examined the financial feasibility of moving ore through Whittier and Skagway. Valdez was not mentioned in either analysis.

CONTINGENCY PORT

Alaska transportation providers are cognizant of the vulnerability of Alaska's limited transportation systems. The Port should formalize contingency plans with major truck and marine transportation providers.

Interior businesses traditionally relying on the Parks Highway corridor, including both trucking and rail, may be open to contingency plans routing freight movement through Valdez in the event the Highway is impassable.

ALASKA DOTPF

“Salt shipments,” including deicer and fertilizer for the Alaska DOTPF, represent a potential market for Valdez. Materials are brought in by sea and trucked to numerous locations throughout the state.

COMMERCIAL FISHING

The regional seafood industry represents steady freight traffic and growth opportunities for the port and community. Proximity to salmon fisheries, local cold storage; and air, road, and ocean transportation options are valued by the commercial seafood industry.

MILITARY

Military growth, especially related to Arctic development, represents opportunities for the port. Personnel changes necessitate regular communication and education. These efforts should be focused on the appropriate government contracting office personnel who are making most of the shipping and logistical decisions for the military. The military-owned Glacier Campground in Valdez and Morale, Welfare, and Recreation programs at Alaska military facilities are opportunities to facilitate this type of outreach with military personnel.

ARCTIC DEVELOPMENT

As evidenced by Shell’s local training activities, development of Arctic oil and gas resources, port facilities, and possible mineral deposits may result in opportunities for Valdez. The community offers unique expertise and facilities that will be of increasing importance for Arctic development. Valdez can grow its reputation as a marine training center. Valdez should target public and private entities with port expansions and Arctic infrastructure development such as Cape Blossom near Kotzebue. Additionally, new infrastructure and training opportunities may result from the recently formed Inuit Arctic Business Alliance including NANA, Arctic Slope Regional Corporation, and Bering Straits Native Corporation.

Officials from the City and Port of Valdez should consider attending the growing number of conferences focused on Arctic development taking place in Alaska and Washington.

Near Term Infrastructure Needs

VALDEZ CONTAINER TERMINAL (VCT)

- The anticipated increase in reefer container volume moving through the VCT may necessitate more plug-ins or temporary generators during the peak salmon harvest.
- A covered freight handling facility would allow shippers to work out of the weather and provide space for warehouse and product storage. However, interviewees noted that the quick exchange between barges and trucks, and limited volume, may make it difficult to recoup the investment.
- Possible improvements to the landing craft area include increased lighting and bollards. Shippers would prefer to secure their landing craft during freight movements, rather than having to keep the vessel under power. Additionally, a platform on the floating dock would increase operational efficiency for landing crafts as tides would have reduced impact on loading or unloading.
- Restrooms, WiFi, and a warming shed would allow for easier longer-term operations at the VCT, such as training conducted by Shell Oil & Exploration Company.

KELSEY DOCK

- The ability to off-load grey water at the Kelsey dock would marginally simplify maritime operations in Valdez.

Longer Term Infrastructure Needs

Valdez leaders should support efforts to continue progress on a gas line, regardless of where it will be built. The construction period will utilize virtually all of Alaska's ports. Valdez laydown areas coupled with the port's marine facilities are of considerable value for this major project.

Currently, AKLNG is developing an assessment of labor and infrastructure needs throughout the state. The study is expected to be released this fall. It will be important for Valdez to remain current as the project evolves and is refined.

Interview Contacts

- Anna Atchison, Kinross Fort Knox Mine
- Tom Barrett, Alyeska Pipeline Service Company
- Jeff Bentz, North Star Terminal & Stevedore Co.
- Joe Bovee, Ahtna Inc.
- Ben Bridwell, Sumitomo Pogo Gold Mine
- Tron Clark, Shell Exploration & Production Company
- Sue Cogswell, Prince William Sound Economic Development District
- Jim Dodson, Fairbanks Economic Development Corporation
- Matt Ganley, Bering Straits Native Corporation
- Cole Haddock, Port of Whittier
- Joe Hardenbrook, Fairbanks North Star Borough
- Brian Hawkins, Port of Homer
- Jason Hoke, Copper Valley Development Association
- John Hosey, City of Valdez
- Aaron Hunting, Alaska DOTPF
- Brian Johnson, Delta Industrial Services
- Barbara Johnson, Alaska Center for Unmanned Aircraft Systems Integration
- Diane Kinney, City of Valdez
- Kristel Komakhuk, Shell Exploration & Production Company
- Jim Kubitz, Alaska Railroad Corporation
- Linda Leary, Alaska Railroad Corporation Board Chair
- John MacKinnon, Associated General Contractors of Alaska
- Colonel Mike Winkler, Eielson Air Force Base
- Darren Prokop, University of Alaska Anchorage
- Norm Regis, City of Seward
- Steve Ribuffo, Port of Anchorage
- David Ridge, Crowley
- Richard Riggs, Silver Bay Seafoods
- Brad Robertson, North Star Terminal & Stevedore Co.
- Jim Scholz, Samson Tug and Barge
- Rick Solie, International Tower Hill Mines
- Ryan Sontag, North Star Terminal and Stevedore Co.
- Colleen Stephens, Stan Stephens Cruises
- Aves Thompson, Alaska Trucking Association
- Marc Van Dongen, Port MacKenzie
- Lisa Von Bargaen, City of Valdez
- Dale Wade, Alaska Railroad Corporation
- Mike Wells, Valdez Fisheries Development Association
- Curt Wilson, Wilson Brothers Distributors/Alaska Marine Lines
- John Woodman, Doyon

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