



moffatt & nichol



# Economic Assessment for Port of Alaska Terminals

Prepared for Don Young Port of Alaska

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# 1



## Presentation

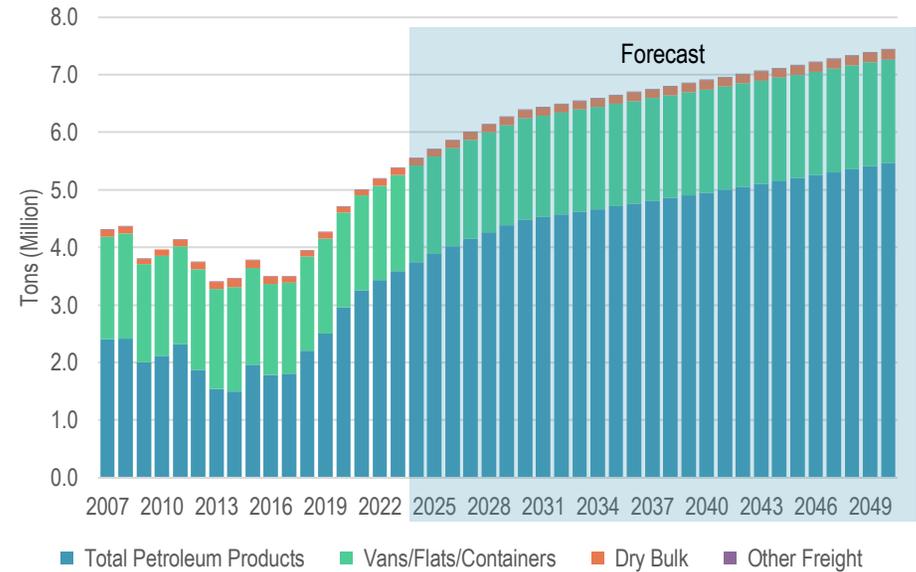
4/24/2024

## Introduction

Moffatt & Nichol (M&N) has been retained by Don Young Port of Alaska to conduct an Economic Assessment of the Port

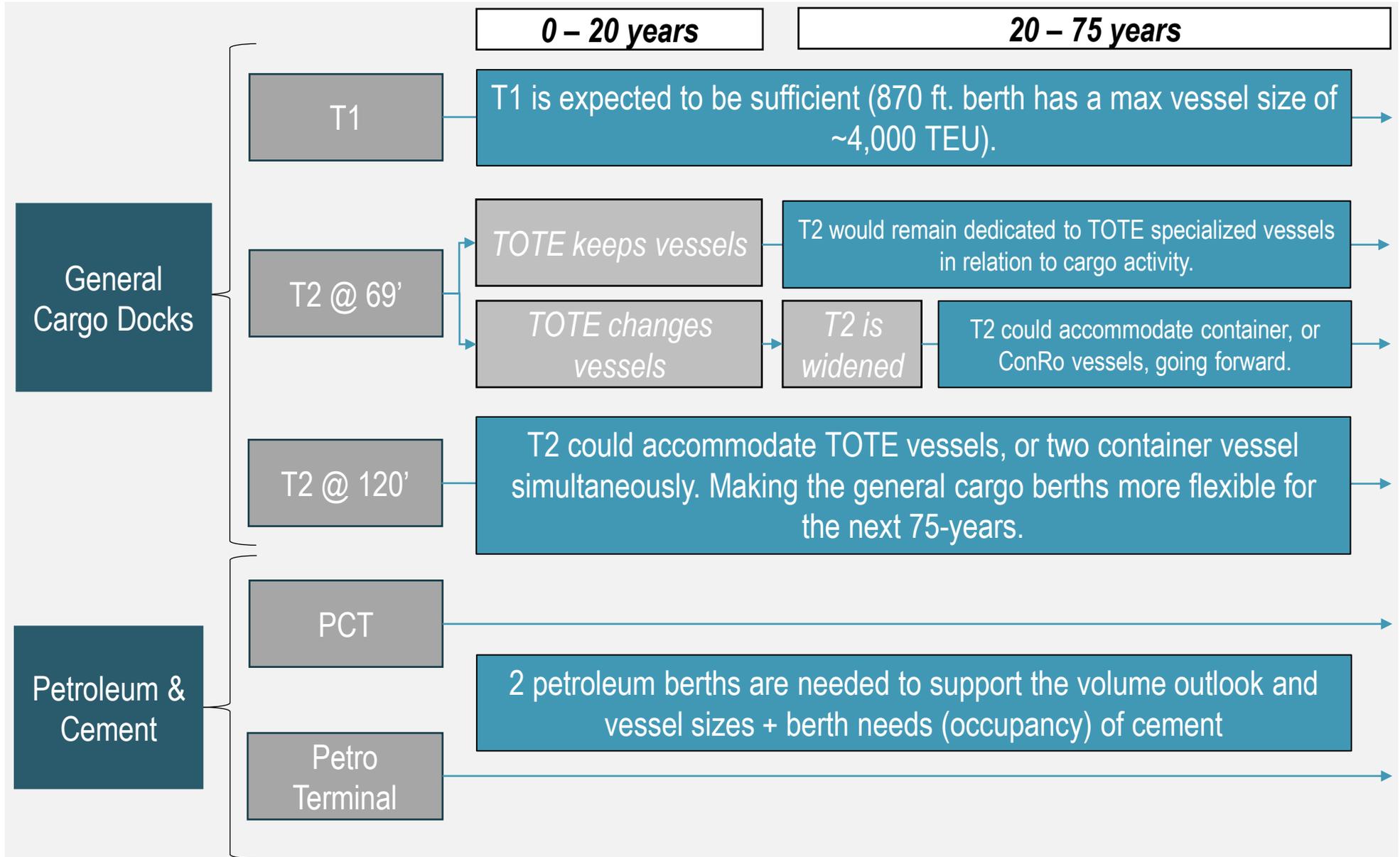
1. **Moderating Economic Growth Still Drives Demand for Diversified Cargo**
  - Container trends – flat
  - Petroleum volumes – slow growth
  
2. **PAMP should aim to provide redundant container and petroleum berths**
  - Alaska would benefit from two container berths
  - Future conditions are likely to change
  
3. **Service Disruption at POA's General Cargo Terminals Exceeds \$39 million / week in Economic Costs**
  - Helps to establish the value of the cargo docks
  - Does not consider probability of berth closure(s) (e.g. for vessel strike, equipment failure, natural disaster)

POA VOLUME FORECASTS



# PAMP Assessment

1) Developing T2 as an identical structure as T1 appears supported by the future market conditions, industry standards, observed practices, stakeholder comments and the potential impact on costs related to delay and/or unforeseen operational disruptions



## Economic Cost Analysis

Calculating the economic cost of a service disruption at POA, helps us understand the value of the infrastructure that is being considered under PAMP

In an attempt to quantify the importance of the Port of Alaska, M&N has estimated the economic costs in a scenario where the Port of Alaska (container terminals) are shutdown for a week.

*This analysis does not claim to encompass fully the economic costs associated with a shutdown.*

**This analysis only considers the impacts on containerized cargo.**

A service disruption would lead to cargo being rerouted either through another maritime port or by land (truck)

M&N has followed the US Department of Transportation's (USDOT) guidelines for measuring the cost of transportation.

Regional Input-Output Multipliers (RIMS) are an established approach to understanding the relationship between how a change in one industry impacts others (or the economy) as a whole.

**Under the base case assumptions, every week the cargo docks at the Port of Alaska are closed have an economic impact of about \$40 million.**

Depending on the assumed split between cargo diversion through Seward vs Alaskan Highway, the economic cost of a one-week shutdown can vary significantly, as depicted in the chart on the right.

ECONOMIC COSTS ASSOCIATED WITH ONE WEEK POA SHUTDOWN



# Vessel Operations at Port of Alaska

POA supports several vessel types including container, specialized roll on roll off, cruise, oil tankers and bulk cement.

## 1. Matson operates a container service at T2

- Matson has invested in new vessels for the larger China-Long Beach service and will replace Alaska vessels with older China-Long Beach vessels.

## 2. TOTE operates a roll on roll off service specially designed for Alaska

- TOTE utilizes two ORCA class vessel to service the trade, emphasizing fast unloading to quickly maintain its weekly service to Alaska
- If an opportunity to increase efficiency and lower costs arises, it may alter future vessel designs

## 3. Cruise vessels share the cargo terminals (T1 and T2) and are expected to remain active going forward.

## 4. Large liquid bulk oil tankers have seen higher demand but face depth restrictions at Port of Alaska

- Tankers have visited Port of Alaska more frequently to keep up with rising petroleum product demand
- Tankers can only call during high tide due to depth constraints, limiting the window of opportunity to use the Port

## 5. Cement-carrying dry bulk vessels will soon share a terminal with liquid tankers

- Cement vessels can spend up to two weeks at the Port
- Vessels may increasingly compete for berth space

### PORT OF ALASKA PRIMARY VESSEL TYPES

Terminal	Vessel Type	Vessel Calls (2023)	Operations	Notes	
T2	 Container		99	Containers lifted on and off vessel by STS cranes	Vessel size will increase
T3	 RoRo		87	Trailers, containers, vehicles and equipment driven on and off vessel using special ramps	RoRo specially designed for Port of Alaska
T2 / T3	Cruise		3	Passengers disembark at cargo terminals	Expected to visit Anchorage more
PCT / POL2	Liquid Bulk Tanker		37	Unloading at POL2	Facing depth restrictions at the Port
PCT	Dry Bulk / Cement		5	Unloading at new Petroleum Cement Terminal	Spending a long time at Port, will eventually share the terminal with liquid bulk tankers

## Port of Alaska Benchmarking Analysis

Like the POA, the Ports of San Juan, Guam, and Hawaii are isolated markets relying on marine infrastructure to serve the population. These ports have multiple berths capable of accommodating a variety of cargo vessels simultaneously which creates redundancy and resiliency during natural disasters and other events which could disrupt operations.

	Location	Function	Container Infrastructure				Notes
			Terminal	Depth	Berth Length	Equipment	
Port of San Juan		The Port of San Juan is Puerto Rico's primary container port serving the island's concentrated population	Puerto Nuevo	39 ft.	4,721 ft.	11 STS Cranes	Hurricanes Irma and Maria left extensive damage to Puerto Rico and the Port in 2017. Puerto Rico used the Port of San Juan and Port of Ponce to transport goods
			Isla Grande	36 ft.	2,000 ft.	3 STS Cranes	
Port of Guam		The Port of Guam handles essentially all the of island's freight	F4, F5, F6	28-35 ft.	1,970 ft.	3 STS Cranes	An earthquake damaged the container terminal in 1993, forcing Guam to import goods through an older, less efficient general cargo dock
Port of Hawaii / Honolulu Harbor		The Port of Hawaii's epicenter is located at the Honolulu Harbor which distributes containerized cargo to the other islands via barge	Sand Island	40 ft.	4,010 ft.	9 STS Cranes	The Port of Hawaii expects to receive larger vessel calls in the future as is undergoing a modernization program to widen its piers
			Kapalama (Under Construction)	-	1,800 ft.	No. of STS Cranes TBD	
Port of Alaska		Port of Alaska is the primary gateway to the state, connecting the isolated population to supplies from the US mainland	T2 (Matson)	35 ft.	1,350 ft.	3 STS Cranes	Anchorage became the primary cargo port in 1961, after a large earthquake decimated the Seward Harbor
			T3 (TOTE)	35 ft.	800 ft.	RoRo Ramps	

# Port of Alaska Competitive Assessment

POA operates within a system of ports that work together to serve the state’s widespread population centers. These ports generally do not compete with one another given that they are focused on serving the needs of their immediate / local communities.

## 1. Goods flow between Seattle and Alaska population hubs

## 2. Southcentral Alaska has the best inland connectivity

- Southcentral Alaska provides a gateway for cargo from Tacoma to reach isolated markets in Alaska’s interior
- Southcentral Alaska cargo facilities have road and rail connections to Fairbanks and the distant North Slope.

## 3. Population hubs in Anchorage and the interior primarily rely on Anchorage-based ports

- Port of Alaska is the only port on the Cook Inlet capable of efficiently handling large container and RoRo vessels

## 4. Seward and Whittier primarily serve local populations with barge services

- Transporting goods to inland markets faces several challenges, including road closures by falling ice and rock along the highway and a potentially congested road / rail tunnel

## 5. Southeast Alaska ports have no land connectivity and serve the population in the immediate area

### SOUTHCENTRAL AND SOUTHEAST ALASKA KEY TRANSPORTATION INFRASTRUCTURE



### SOUTHCENTRAL AND SOUTHEAST ALASKA CARGO FACILITIES

Region	Facility	Vessel Type	Inland Connectivity	Primary Market
Anchorage	Port of Alaska	Container, RoRo	●	Anchorage, Interior
	Ship Creek	Barge	●	Anchorage, Interior
Kenai Peninsula	Seward	Barge	●	Local population
	Whittier	Barge	●	Local population
Southeast	Juneau, Ketchikan	Barge	●	Local population

● Stronger ● Weaker