

TRANSPORTATION IN THE ARCTIC

- New shipping routes opening up in the Arctic and economic activity in the region are creating significant opportunities for maritime commerce
 - More economically and environmentally efficient shipment of goods over shorter distances
 - New cruise ship excursions that provide major boosts to tourism-related economic activity
 - Bering Strait between Alaska and Russia now sees over 300 transits annually
- In 2010, the Coast Guard said it needed 6 heavy icebreakers and 4 medium icebreakers to fulfill Coast Guard and Navy missions in the Arctic, yet today's U.S. polar icebreaking fleet is comprised of just one operational heavy icebreaker (expected to end service around 2020) and one medium icebreaker, neither of which are based in Alaska
- The Coast Guard air station closest to the Arctic is in Kodiak, which is more than 1,100 miles from the U.S. Arctic's northernmost community of Barrow
- Alaska currently lacks a deepwater port along its northern and western coasts, but one is now under consideration for Nome, AK
- According to NOAA, while new charting efforts are taking place this summer, less than 1% of U.S. Arctic waters have been surveyed with modern survey methods, with much of the Arctic charting based on pre-WWII surveys or not surveyed at all

NORTHERN SEA ROUTE

Northern Sea Route, used mainly as a Russian domestic supply and export route, is the Arctic's fastest-growing shipping route, with a 50% increase in vessel transits from 2012 to 2013

- 71 ships carried 1.35 million tons of cargo and 507,000 tons of ballast, with 67% of the cargo shipments involving oil products and the remaining shipments comprised of iron ore (15%) general cargo (7.4%), coal (5.5%) and LNG (5%)
- 41 ships carrying 1.19 million tons of cargo traveled the entire Northern Sea Route, while the remaining 30 ships departed from or arrived at ports inside the Northern Sea Route (23) or traveled exclusively within the Northern Sea Route (7)
- 54 of the 71 trips carrying 52% of the cargo originated in Russian ports

NORTHWEST PASSAGE

The Northwest Passage, which runs across the top of North America, has traditionally been a remote route, but changing sea ice patterns have made it an increasingly viable operation for commercial cargo transportation

- In 2013, for the first time since the U.S. tanker S.S. Manhattan transited the route in 1969, a large commercial vessel traveled across the Northwest Passage along its route from Vancouver to Pori, Finland
 - The Northwest Passage route reduced the distance traveled by ~1,000 nautical miles and cut transportation time from 9 to 5 days, leading to total savings of \$200,000
- In October 2014, on a voyage transporting nickel ore from Deception Bay in Canada to Bayuquan, China, the MV Nunavik cargo ship became the first cargo ship to sail through the Northwest Passage solo without an icebreaker escort
 - According to Fednav, the polar route taken by the ship is ~40% shorter than the Panama Canal alternative route, and the operator expected to reduce greenhouse gas emissions by ~1,300 metric tons
- In 2016, 900 passengers are expected to board the passenger ship Crystal Serenity for the largest expedition to date through the Northwest Passage