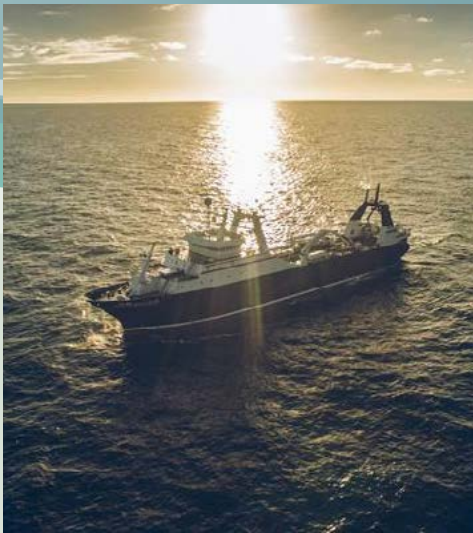


Modernization of the North Pacific Fishing Fleet

An Economic Opportunity Analysis

November 2016



Commercial fishing in the North Pacific plays a critical role in the Washington State economy, creating tens of thousands of jobs and billions of dollars in labor income.

Careful resource management and modern fishing practices ensure sustainable fisheries for many years into the future. However, modernizing the commercial fishing fleet, with an average vessel age of 40 years, is needed to enhance crew safety and maintain the fleet's competitiveness in global seafood markets.

The North Pacific Fleet

Number of Commercial Vessels Over 58 Feet: **414**

Average Age of Active Vessels: **40 years**

Active Vessels Year-Built Range: **1918 – 2016**

Average Length of Active Vessels: **126 feet**

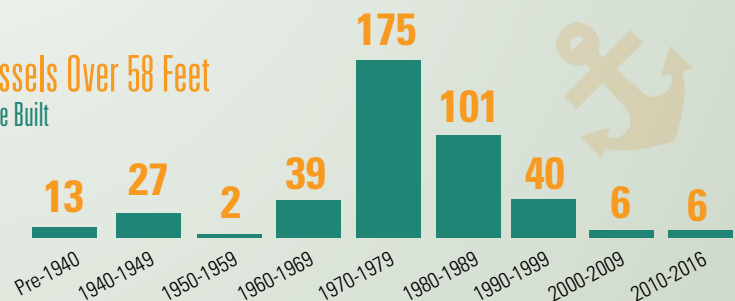
Key Species: **Pollock, Pacific Cod, Flatfish, Rockfish, Atka Mackerel, King Crab, & Snow Crab**

Fleet modernization also represents an economic opportunity for the region. There are over 400 vessels 58 feet or longer engaged in North Pacific fisheries. Billions of dollars will be invested in vessel construction over the next 10 to 20 years, with a large share of that potentially occurring in Washington shipyards. However, it is important to recognize that a wide range of factors will determine the pace, scale, and location of modernization work. With an understanding of those factors, industry and policymakers can, together, take steps to fully realize this important economic opportunity.

The North Pacific Fleet is Diverse

- Vessels in the North Pacific fleet operate in the Bering Sea/Aleutian Islands and Gulf of Alaska regions, sustainably harvesting billions of pounds of seafood every year.
- This fleet of catcher vessels, catcher/processors, support vessels, and motherships range from 60 feet to over 400 feet, with most between 100 and 200 feet.

Number of Active Vessels Over 58 Feet By Decade Built



Source: Commercial Fisheries Entry Commission. Excludes five vessels due to unknown age.



New Vessels Require Significant Levels of Investment

- ✂ Vessel replacement costs can range from \$15 million for a smaller crabber or trawler to more than \$130 million for a catcher/processor.
- ✂ In 2014, vessel revenues averaged from about \$1.5 million for smaller crabbers and groundfish vessels to over \$16 million for large catcher processors.

North Pacific Fleet Modernization is Already Underway

- ✂ Since 2002, 19 North Pacific fishing vessels over 58 feet have been built or significantly modified. Ten of the projects have been completed within the last five years.
- ✂ More than one-third (37 percent) of these vessel projects occurred in Washington shipyards.

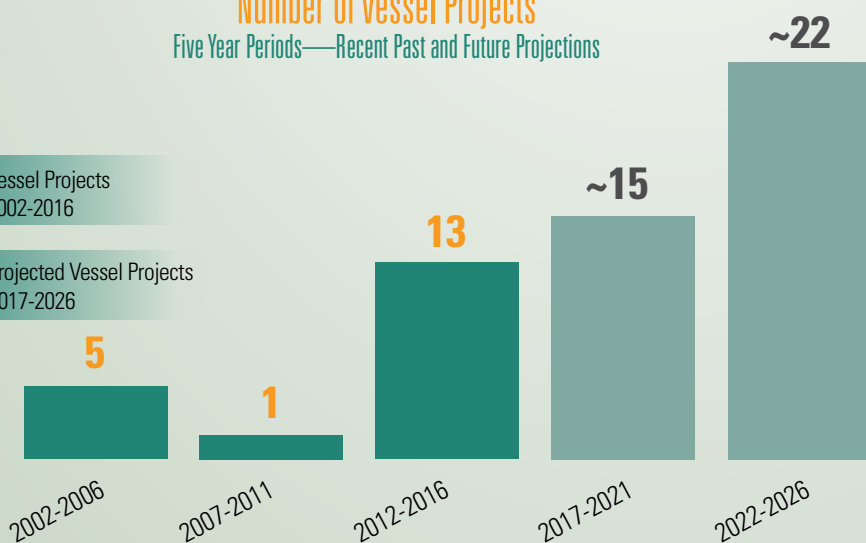
The Pace of Modernization is Projected to Grow Significantly in the Next Decade

- ✂ Within the next ten years, an estimated \$1.6 billion in modernization projects will be completed for the North Pacific fleet.
- ✂ On average, approximately four new vessel projects are expected each year between 2017 and 2026.

Number of Vessel Projects
Five Year Periods—Recent Past and Future Projections

19 Vessel Projects
2002-2016

37 Projected Vessel Projects
2017-2026



Source: McDowell Group estimates.

The Fleet's Newest Vessels



Araho

Length: **194 feet**
 Completed: **2016**
 Owner: **O'Hara Corporation**
 New vs. Conversion: **New**
 Type: **Amendment 80**
 Shipyard: **Eastern Shipbuilding Group**
 Shipyard Location: **Florida**



Blue North

Length: **191 feet**
 Completed: **2016**
 Owner: **Blue North**
 New vs. Conversion: **New**
 Type: **Freezer Longline**
 Shipyard: **Dakota Creek Industries**
 Shipyard Location: **Anacortes, WA**



Defender

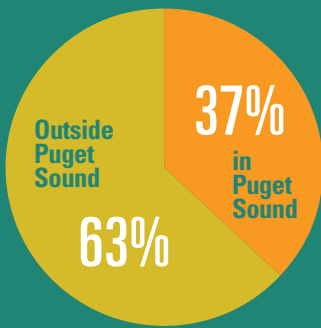
Length: **170 feet**
 Completed: **2016**
 Owner: **Global Seas**
 New vs. Conversion: **Conversion**
 Type: **AFA Catcher Vessel**
 Shipyard: **Patti Marine**
 Shipyard Location: **Florida**

Additional vessels completed in 2016 include the *Starbound* and *Seafreeze America*.

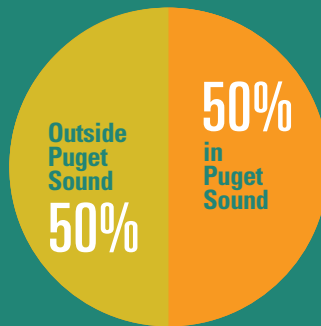


Location of Vessel Projects

Completed in Last 15 Years



Estimated in Next 10 Years



Estimated Annual Spending on Fleet Modernization in Puget Sound

2017-2021

\$60
MILLION

2022-2026

\$90
MILLION

Total Anticipated Investment in Puget Sound, 2017-2026

\$785 MILLION

Washington is Poised to Benefit From Fleet Modernization

- ✂ In the next 10 years, an estimated 50 percent of new vessel projects will occur in Washington shipyards.
- ✂ This higher rate of market capture (compared to 37 percent since 2002) reflects efforts by the region's maritime industry to cooperate in attracting investment to Washington shipyards.
- ✂ An estimated annual average of between \$60 million and \$90 million will be spent on fleet modernization in Washington between 2017 and 2026, totaling approximately \$785 million.

Many Factors Influence the Pace and Impact of Modernization

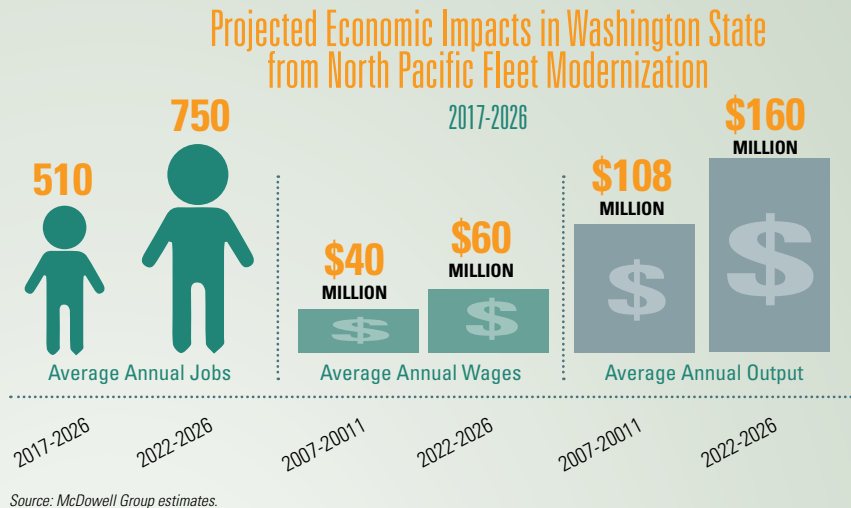
- ✂ Adding new, more sophisticated processing capacity is a key impetus for investment in modernization. Increased resource utilization and higher valued products will result from this improvement.
- ✂ Owners of catcher vessels with no on-board processing and limited opportunity to add value to their harvest are less motivated to modernize.
- ✂ Fisheries rationalization — conversion from open access fisheries to quota allocation — has made modernization more attractive to fishermen and commercial lenders.
- ✂ Some fisheries are more constrained than others in their ability to generate revenues sufficient to invest in modernization.
- ✂ Fishing vessels can be a challenge for commercial lenders. The terms of financing are an impediment for many vessel owners.
- ✂ Many factors influence the investment decision. Fuel efficiency, regulatory compliance, and crew safety and comfort are considered. Modern vessels are more likely to attract and retain a skilled workforce.



- ✂ For investment in modernization to accelerate, an approach to vessel construction other than the typical "one-off" approach may be required. Some level of vessel standardization would reduce costs and risk for shipyards, vessel owners, and lenders. To the degree such a standardized approach could be implemented in Washington, the local economic impact of modernization could be enhanced.

Economic Impacts in Washington

- The economic impact of fleet modernization in Washington state will include between 510 and 750 jobs over the next decade, and \$40 million to \$60 million in annual labor income.
- Annual output will average between \$108 million and \$160 million over the next decade.



Conclusion and Recommendations

The North Pacific fleet is anticipated to spend \$1.6 billion on vessel projects in the next ten years. The ability for Puget Sound shipyards to capture the maximum amount of this activity will depend on industry and policy-makers to enhance the region's competitiveness through a range of strategies.

Advocacy and support for:

- Preservation of Puget Sound's working waterfront
- Improvement in transportation infrastructure
- Workforce development and affordable housing
- Collaboration among vessel owners, shipyards, and lenders
- The maritime industry in Seattle, Olympia, and Washington, D.C.

Financing assistance:

- Loan guarantees and reduced mooring rates for vessels constructed/modified in Washington
- Educate/engage the banking community on the fishing fleet



Facility improvements:

- Increase dock space for the North Pacific fleet
- Upgrade Fishermen's Terminal and Pier 91
- Improve services and facilities on Harbor Island

Content of this brochure is based on the report *Modernization of the North Pacific Fishing Fleet: An Economic Opportunity Analysis*. Please refer to the full report, available at www.portseattle.org for additional detail.