



WASHINGTON MARITIME FEDERATION

A Coordinated Voice for Maritime Progress

ENVIRONMENTAL LEADERSHIP 2020

The Washington Maritime Federation (Federation), a statewide organization providing a unified voice for the diverse and interdependent sub-sectors of the maritime industry, supports policy and investment priorities that encourage industry vitality, growth and resilience. The organization's regional, state and federal priorities are determined through a consensus decision-making process by Federation members who are also advised by associate members and a broad group of business, labor and government stakeholders.

Washington State's maritime sector is already a global leader in sustainability. The Federation is committed to insuring that Washington remains an industry leader in the adoption of voluntary standards, best practices and emerging technologies to build a more sustainable future. Slowdowns for Orca's and Harbor Safety Committee Standards of Care are just two examples of important recent voluntary actions. The Federation fully recognizes the urgent need to reduce carbon emissions and supports industry efforts that have led to significant reductions: operating efficiencies, cleaner engines and fuels and greater use of electricity. The Federation is committed to balancing environmental goals with economic goals. Environmental improvements can only be funded and achieved if we have a healthy, profitable and growing maritime industry across all of the above sectors.

Federation members work towards a more sustainable maritime transportation system through the following examples:

- Increased design and manufacturing in the commercial and recreational markets for technological advancements in propulsion, coatings, composites, energy storage and more
- The most advanced architectural, engineering and design teams working on vessels around the world
- Healthy and growing maritime businesses and organizations working in concert for more effective, rational and science-based environmental regulation.
- Ports, maritime and logistics companies recognized as international leaders for sustainable operations and practices.
- Workforce training and education with a focus on the next generation of green jobs within the maritime industry.

Actively Working Toward A More Sustainable Future



SHIPPING AND LOGISTICS

Ninety percent of all goods are shipped via oceans, and maritime transport is still by far the most fuel efficient means for moving freight. Working from this base, Washington's shipping sector has already made significant environmental investments and maintains the highest best management practices. Examples include:

- Cargo and Cruise ships achieved another year of zero oil spills transiting to and from Puget Sound ports – over 40 years now!
- Nearly 80% of ships calling Puget Sound ports no longer discharge any ballast water; the remaining 20% exchange water

at sea while rapidly installing advanced treatment systems

- Ships moving to LNG, exhaust scrubbers and ever cleaner fuels to reduce sulfur, particulate matter, and greenhouse gas emissions, with the next big reduction coming for vessels anywhere at sea in 2020.
- New hull coatings reduce invasive species threats while reducing friction and increasing fuel efficiency.
- Transit speeds have been adjusted to use less fuel with a 20% reduction in speed leading to a 40% reduction in fuel consumption.
- Port trucking has converted to cleaner engines and fuels while alternative powered trucks are being tested and introduced by industry.
- Marine terminals are being updated to improve cargo flow and efficiencies leading to reduced emissions.
- Navigation and vessel traffic systems are leveraging new technology to further enhance safety and reduce spill threats
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- Offshore ship routing and monitoring measures are decreasing the risk of transits to and from Puget Sound ports.



PUGET SOUND MARITIME AIR EMISSIONS INVENTORY

Based on the 2016 Puget Sound Maritime Air Emissions Inventory, the US ports are on track to meet key emission reduction goals in the Northwest Ports Clean Air Strategy (NWPCAS):

- particulate matter by 81%, sulfur dioxide by 97% and greenhouse gases up to 20% since 2005
- 78% reduction in DPM emissions per metric ton of cargo between 2005 and 2016
- 17% reduction in greenhouse gas emissions per metric ton of cargo between 2005 and 2016

These reductions have been possible due to many factors, including the collaboration between ports and partners to implement the NWPCAS, significant investments by industry, funding and resourcing support from partner agencies (Washington State Ecology, EPA, Puget Sound Clean Air Agency), and changes to international fuel sulfur rules

www.pugetsoundmaritimeairforum.org



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www.maritimefederation.com



WASHINGTON STATE FERRIES

The Department of Transportation is in the process of converting its three largest ferries and has funded the first of 5 newbuilds into electric/hybrid propulsion

- 2,000 passengers and 205 vehicles each on Jumbo Mark II's
- Savings of .02 MMT GHG (9.5% of fleet emissions) & 2M gallons of fuel / year.

The WSF long range plan includes 15 new hybrid or full electric ferries with the goals of:

- Low to zero-emissions
- Increased water quality
- Noise reduction for the region's sensitive marine ecosystem
- Prove profitability and short-term payback.

www.wsdot.wa.gov/ferries/

FISHING AND SEAFOOD

Today, the North Pacific fishery is stable and is considered one of the best managed in the world. New vessels are being designed to exceed the highest standards, including the deployment of first-of-a-kind technologies to maximize fuel efficiency, utilization of the product and crew safety. Examples include:

- Reduced fuel usage by more than 50%,
- Utilization of more than 95% of every fish caught.
- Collaborative fisheries management and certification

www.alaskaseafood.org/sustainability

RECREATIONAL BOATING

Increasing the industry's environmental standards beyond what is required adds to the allure of recreational boating in this environmentally-conscious region, protects critical habitat we all enjoy, and supports a growing market. Examples include:

- We have championed a permanent tax on boaters to ward off invasive species and address derelict vessel disposal. The tax has raised \$12 million in ten years.
- We led the effort to phase-out copper-bottom paint.
- We created the Clean Boating Foundation, which certifies Boatyards as clean.
- We co-founded the Clean Marina Program, which touts 80-plus Clean Marinas.

www.cleanboatingfoundation.org



PERFORMANCE CRITERIA

The Washington Maritime Federation is a supporting associate member of Green Marine, a voluntary environmental certification program for the North American marine industry. It is a rigorous, transparent and inclusive initiative that addresses key environmental issues. To receive certification, participants must benchmark their annual environmental performance through exhaustive evaluation guides, verified by an accredited external verifier and agree to publication of their individual results.

www.green-marine.org

The Washington Maritime Federation has set priorities to further support the intersection of Clean Technology, Job Skills Training and Economic Development in the Maritime Sector including:

- Ongoing interaction between industry, agencies and economic development organizations on the opportunities and benefits of sustainability in the industry
- Public outreach and education on the intersection of Clean Technology and Maritime sectors, including showcasing models and examples.
- Public and private incentives for clean fuels, emerging technology, best practices, waste management and emission reductions.
- Increased sustainability education and emerging technology instruction in maritime training.
- Promotion of voluntary environmental performance criteria in the many sub-sectors of the maritime industry.

For more information, go to:

www.maritimefederation.com
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WASHINGTON MARITIME BLUE

Washington Maritime Blue is a strategic alliance for maritime innovation and sustainability as an independent cluster organization to implement Washington State's Strategy for the Blue Economy. As a partnership between industry, public sector, research & training institutions, and community organizations the mission is to create a world-class, thriving, and sustainable maritime industry through knowledge sharing, collaborative R&D, commercialization, business and workforce development. www.maritimeblue.org

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