



Washington Office of Superintendent of
PUBLIC INSTRUCTION

REPORT TO THE LEGISLATURE

UPDATE: Maritime Academy Feasibility Final

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EXECUTIVE SUMMARY

During the 2023 legislative session, funding was appropriated to the Office of Superintendent of Public Instruction (OSPI) to execute a contract for the purpose of completing a feasibility study for the creation of a maritime academy on the Olympic Peninsula.

The feasibility study needed to include, but was not limited to, the selected location, design, scope, and budget for the construction of the maritime academy. Additionally, the study must include plans to address systems, policies, and practice that address disparities of historically marginalized communities in the maritime industry.

The final feasibility study report was submitted to OSPI by Northwest Maritime on July 23, 2024, with the following four recommendations: (1) Increase interest in maritime careers, (2) support incremental capital investments at existing institutions, (3) support instructor recruitment and retention, and (4) consider adding post-secondary capacity if student demand increases.

The study addresses recommendations for increasing diversity in the maritime sector by categorizing barriers into three categories: structural, familiarity, and perceived risk. The need for affordable student housing, the need for mentors and instructors from diverse populations, and the need to establish a partnership between industry and K–12 education that focuses on equity centered education and practices were all highlighted as ways to address current disparities. The study acknowledged the abundant industry opportunities but found faults with adding another maritime education institution to those already experiencing low enrollment.

“Both here in Washington and nationally there is excess training capacity in existing facilities, at both established 4-year federally certified maritime academies, at two-year colleges. With the exception of one institution, all levels have reported enrollment challenges in recent years. Interviews revealed that some institutions estimate as much as 50–100% under-enrollment as compared to potential capacity. This is an existential problem for these institutions that would be exacerbated by adding more post-secondary capacity prior to increasing student demand for training.”

Northwest Maritime. *Maritime Academy Feasibility Study*, 23 July 2024.

A cost summary estimate was provided for a Maritime Education Institution focused on post-secondary learning that ranged from \$209–361 million (not including land purchase) with the range in price reflecting the cost of either a 20,000 square foot or 40,000 square foot location. Total project duration was quoted at 4.5–6.5 years for a facility that would include instruction on vessel operations, marine construction, and marine resources. The three sites recommended by the study were Aberdeen, Port Angeles, and Port Townsend.

INTRODUCTION

The Olympic Peninsula is a prime location to support expanded access to maritime based instructional programs, as there are many existing industry- and community-based partners, and existing instructional based maritime programs.

The feasibility study done by Northwest Maritime provides clarity on the intended audience and purpose of the maritime academy including recommendations for plans to address systems, policies, and practice that address disparities of historically marginalized communities in the maritime industry.

BACKGROUND

Multiple community-based and formal education programs exist identifying multiple approaches to developing maritime focused instruction. [Northwest Maritime Center](#) located in Port Townsend provides sector-based expertise and community based educational programs. The mission of the Northwest Maritime Center is to, “engage and educate people of all generations in traditional and contemporary maritime life, in a spirit of adventure and discovery.” The Northwest Maritime Center provides youth classes in the summer and school and group-based programs that include on-the-water, classroom, and boat shop-based programming. Additionally, adult classes in the areas of navigation and seamanship, sailing classes, boat building workshops, and providing access to a maritime simulator to support candidates’ preparation for west coast pilot association practical exams are offered through the center. The Peninsula is also home to the Olympic Coast National Marine Sanctuary including the [Olympic Coast Discovery Center](#) located in Port Angeles.

The [Port Townsend Maritime Academy](#) is a satellite skills center of West Sound Technical Skills Center. This satellite campus provides maritime operations learning experiences to students in Port Townsend, Chimacum, Quilcene, Coupeville, Sequim, North Kitsap, South Kitsap, Central Kitsap, Bainbridge Island, Bremerton, North Mason, and Peninsula School Districts. West Sound Technical Skills Center is a core campus operated by Bremerton School District.

The [Maritime High School](#) opened with its first 9th grade class in September of 2021. Maritime High School is a collaborative between Highline Public Schools, Northwest Maritime Center, Port of Seattle, the Duwamish River Community Coalition, and many industry and community-based partners. Although 51% of the seats are reserved for students within the Highline Public Schools boundaries, any student in the region can apply to attend. The lottery process and priority group detail may be found on their [website](#).

Local high schools, skills centers, and middle schools continue to adopt and implement Core Plus programing. [Core Plus Maritime](#) is an industry-based curriculum that is provided free to schools in Washington. Students can earn the Core Plus certificate which employers have identified as resulting in preferential interviews, and employment opportunities for students who complete the program and earn the certificate. Through their instructional experience, students in Core Plus

Maritime programs can earn English, math, science, and Career and Technical Education (CTE) credit towards graduation by using a state approved CTE equivalent [framework](#).

Higher education programs focused on the maritime industry are available in the greater south sound region. Programs such as [Seattle Central College's Seattle Maritime Academy](#) provide education and training opportunities for Marine Deck technology, Marine Engineering Technology, coursework for renewing licensing requirements, and continuing education opportunities for recreational boaters.

Feasibility Study Summary

The feasibility study submitted by Northwest Maritime included the following sections:

1. Executive Summary

The key findings as stated in the executive summary found that overall, there is (1) low current demand for training, (2) less than full utilization of current post secondary facilities, (3) an acute need to fill workforce gaps in marine construction and vessel operations, and (4) that more work is needed to increase inclusion of BIPOC communities in the sector.

2. The Need for a Maritime Workforce

In the feasibility study, Northwest Maritime included the following indicators of workforce shortages in Washington state:

- Washington State Ferries were forced to cancel 647 sailings due to crew shortages in the first quarter of 2024 alone.
- The coming construction of 16 new hybrid electric ferries.
- An increased rate of adaptation and replacement of coastal infrastructure to accommodate sea level rise.
- The massive industrial mobilization that is just beginning for offshore wind power generation.
- 58,000 new maritime and maritime-adjacent jobs over the next decade relating to offshore wind.

3. Supply and Demand for Maritime Education

As reported in the study, "the creation of additional post-secondary capacity at this time is not needed until existing capacity is more fully utilized". Northwest Maritime stated the two following problems with current capacity:

- Under-enrollment: The nation's four-year schools have reported a 40% drop in enrollment over the past eight years. In 2022, low enrollment at Seattle Maritime Academy threatened its closure until local industry and public officials rallied support and funds.
- Excess capacity in physical infrastructure: As a result of low enrollment, there are dormant classrooms and training facilities that could be pressed into service if and when student demand increases. While not exhaustive, anecdotal evidence suggests that between dormant facilities and creative scheduling enrollment could nearly double before new capital infrastructure or new training institutions would be needed. The one exception to that is the Marine Tech Program in Anacortes which is currently looking for more facilities to accommodate growing demand. Also, Peninsula College in Port

Angeles is in the process of creating a new program to support the businesses in the north Olympic Peninsula's boat building and service cluster.

This section of the report concluded that "Washington's existing two-year programs related to the onboard careers in vessel operations have experienced declines, but programs related to careers more closely associated with shoreside occupations such as vessel maintenance and construction have enjoyed modest growth".

4. Building Demand for Maritime Education

In evaluating the opportunities for building demand for maritime education, the feasibility study evaluated the pipeline of community programs and events, primary and middle school, high school, and postsecondary opportunities. Highlighting programs such as Core Plus Maritime, Maritime High School, and Maritime 253 as models of major initiatives that have emerged in Washington state to serve students and maritime employers.

In a section titled 'Criticisms of present state of K-12 and community programs', Northwest Maritime states "one of the flaws of the current community of programs operating K-12 programming in the state is that it is difficult enough to capture them all in a single document, let alone understand their offerings or how those offerings are related to each other, let alone the greater goal of workforce development". The study goes on to recommend strategies such as alignment of marketing efforts, focusing on acquisition volume rather than specific career paths, and alignment of requirements for both industry and program participants.

5. Addressing Disparities

Northwest Maritime starts their section on addressing disparities in the maritime sector by categorizing barriers into three categories: structural, familiarity, and perceived risk. Recommending the need for affordable student housing, the need for mentors and instructors from diverse populations, and a partnership between industry and K-12 education that focuses on equity centered education and practices.

Some of the data included in the study includes:

- The U.S. maritime sector is overwhelmingly male, approximately 87% of the workforce.
- U.S. maritime workers are overwhelmingly white, comprising about 93% of the workforce.

6. Maritime Academy Educational Scale and Scope

This section of the study included recommendations on how to overcome the financial burden of traditionally small maritime academies stating that "each of the nation's six state maritime academies has fewer than 2,000 students". These recommendations include: (1) Offer multiple maritime pathways on the same campus, (2) co-locate at an existing post-secondary institution, (3) exist as a satellite program of a larger institution, (4) focus on 2-year programs. It was highlighted that the "specific degree is less important than the career-specific accreditations, licenses, and endorsements (see list below) that are so common in the maritime field". Vessel operations, marine construction, and marine resources were the three curriculum pathways recommended by the study.

Table 1: Scope of Instruction – Target Certifications

	Primary Certifications	Additional Certifications
Vessel Operations	<ul style="list-style-type: none"> • Able Bodied Seaman (AB) • Qualified Member of the Engineering Department (QMED) • Captain’s license (limited tonnage) 	<ul style="list-style-type: none"> • Basic Safety Training • Lifeboatman • Rating Forming Part of a Navigational Watch • Food handlers permit • Advanced first aid • Outboard repair • AMSEA drill instructor • Hazardous Waste Operations and Emergency Response (HAZWOPER)
Marine Construction	<ul style="list-style-type: none"> • Welding (aluminum or steel) • Project management • CAD 	<ul style="list-style-type: none"> • Advanced first aid • Crane operator • Pile Drive Operator • Offshore wind*
Marine Resources	<ul style="list-style-type: none"> • Shellfish/Finfish Aquaculture • Carbon sequestration 	<ul style="list-style-type: none"> • Food Handlers Permit • Advanced First Aid • HAZWOPER

Source: Northwest Maritime. *Maritime Academy Feasibility Study*, 23 July 2024.

7. Field Study Research

For field study research, the feasibility study reviewed the major four-year degree granting US maritime academies as well as maritime specific post-secondary programs in the pacific northwest. This review of other education institutions helped inform recommendations for facility location, needs, and size of the current proposed project.

8. Site Evaluations

The three sites recommended by the study were Aberdeen, Port Angeles, and Port Townsend. The study evaluated pros and cons of each based on the following criteria:

- Deep water access and proximity to maritime activity (prerequisite)
- Adjacency to intermodal transport (e.g. rail, highways, airport, etc.)
- The presence of maritime employers
- The presence of services such as grocery stores, schools, etc.
- Affordability of housing and cost of living
- Demographic diversity as a proxy for inclusivity

The evaluation of each found that “While post-secondary maritime education could be successful someday in any of these communities, at this time it appears Port Angeles likely holds the most potential, given the criteria above”.

9. Facility size, cost, and timeline

A cost summary estimate was provided for a Maritime Education Institution focused on post-secondary learning that ranged from \$209–361 million (not including land purchase) with the range in price reflecting the cost of a 20,000 square foot or 40,000 square foot location. Total project duration was quoted at 4.5–6.5 years for a facility that would include instruction on vessel operations, marine construction, and marine resources.

10. Appendices

- List of interviewees
- Field research links
- USCG Credentialing Hierarchy
- References
- Site evaluations

CONCLUSION & NEXT STEPS

Northwest Maritime included multiple future questions and further considerations throughout their study that would be relevant in planning next steps. These questions focus on areas such as collecting baseline data, evaluating what is currently working, and further research into the location and scale of this proposed project. Overall, the study highly encourages efforts dedicated to building enrollment at already established facilities. The full report is available by request.

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