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September 30, 2020

Dear Alaskans,

Ensuring Alaska has a skilled workforce is a shared mission of the University of Alaska (UA) and the Alaska Department of Labor and Workforce Development (DOLWD). Our programs collectively reach every region of the state through UA's three separately accredited universities and 13 community campuses, DOLWD's Alaska Vocational Technical Center (AVTEC), and through distance delivery and satellite locations.

We provide training for a variety of industries, including maritime, that are critical to Alaska's economy. Alaska is a maritime state -- other sectors that drive our economy are dependent on maritime activity and support. The waters off Alaska's 34,000 miles of coastline produce more than 60 percent of the nation's seafood harvest, and communities and consumers depend upon marine lines for transporting fuel, food, and consumer goods. The maritime industry generates hundreds of millions of dollars annually for Alaska's economy. All of this requires a skilled workforce, which UA and AVTEC are committed to developing.

Since 2014, our collaboration has grown as we have worked together to share and leverage resources, including facilities, instructors, and curricula in pursuit of implementing the Alaska Maritime Workforce Development Plan. In 2019 we formalized our partnership with the creation of the Alaska Maritime Education Consortium (AMEC) and together have worked diligently over the past year to identify projects that will enhance training for Alaska's afloat and ashore maritime occupations. These efforts will increase access to maritime career pathways for Alaskans and are enhanced through our shared partnerships with school districts, industry, other postsecondary providers, and stakeholders. This Action Agenda describes these projects.

We are committed to this important work, as a skilled maritime workforce is the bedrock of Alaska's economic recovery, growth, and stability.

Alaska Department of Labor and Workforce Development

Dr. Tamika L. Ledbetter, Commissioner

University of Alaska

Pat Pitney, Interim President

» I. INTRODUCTION

Alaska Maritime Education Consortium and the Action Agenda

Alaska has two main training providers for the maritime industry: the University of Alaska (UA) system, which includes the University of Alaska Southeast Maritime Training Center in Ketchikan and UA community campuses throughout the state; and the Alaska Maritime Training Center (AMTC) at the Alaska Vocational Technical Center (AVTEC), the state's training center located in Seward and operated by the Alaska Department of Labor and Workforce Development (DOLWD).

On April 8, 2019, UA hosted leaders in maritime training from UA and AVTEC, where they formally established a partnership - the Alaska Maritime Education Consortium (AMEC) - to combine their efforts in providing access to education and training for afloat and ashore careers across the state of Alaska. The focus is on the Marine Occupations and Support Industries (MOSI) sector listed in the 2014 Alaska Maritime Workforce Development Plan. The MOSI sector comprises occupations in boat and ship building, vessel repair and maintenance, port maintenance, and vessel operations.

AMEC Vision

Alaskans will fulfill the workforce needs of Alaska's maritime economies.

AMEC Mission

Collaborating to prepare Alaskans for afloat and ashore careers that will support and strengthen the maritime workforce.

AMEC Strategic Priorities

- **»** Leverage and coordinate maritime training resources and assets to provide access to quality maritime training locally and statewide (who is being served).
- » Engage maritime industry employers, associations, stakeholders, and other partners to advance our mission (who needs to be involved to accomplish the mission).
- **»** Work efficiently to prioritize and support training investments for maritime workforce needs (how resources are allocated).

AMEC presents this Action Agenda as a follow-up to the 2014 Plan. It includes a brief summary of the Plan's goals and strategies, an update and review of MOSI occupations and labor market information, examples of activities since the Plan was published, and specific AMEC projects to strengthen MOSI training and employment over the next five years.

2014 Maritime Plan Goals and Strategies

The 2014 Alaska Maritime Workforce Development Plan¹ was created by a large group of stakeholders, including maritime businesses, industry groups, state agencies, and education and training providers. It serves as "a call to action . . . to enable Alaska's maritime sector to

remain economically vibrant, ensure that Alaskans are qualified to fill these skilled and well-paid positions, and increase the number of Alaskans in this workforce." The Plan's overarching objective is to help sustain and enhance the economy of Alaska and its communities through three goals and five strategies.

2014 MARITIME PLAN GOALS

- 1. Developing a responsive workforce that enables the maritime sector to remain a substantial contributor to the state
- 2. Guiding Alaska's workforce to discover and prepare for the wide range of employment opportunities in the maritime sector
- 3. Increasing the number of Alaskans working in skilled maritime occupations

2014 MARITIME PLAN STRATEGIES

- Grow awareness of occupations and develop career pathways
- 2. Improve workforce readiness
- 3. Train Alaskans for maritime careers
- 4. Support recruitment and retention
- 5. Promote sustained industry engagement

ALASKA MARITIME WORKFORCE DEVELOPMENT PLAN Supporting a strong, sustainable maritime workforce in Alaska Developed by representatives of Alaska Fisheries, Seafood, and Marine Industry Sectors Alaska State Agencies University of Alaska May 2014

Priority Occupations and Labor Market Information

The 2014 Plan identified 23 priority occupations in three maritime sectors—Marine Occupations and Support Industries (MOSI); Research, Enhancement, and Management (REM); and Seafood Harvesting & Processing (SHP)—and it emphasized the importance of the maritime industry in Alaska. The three maritime sectors combined represent Alaska's largest private employer, with over 500 firms and a workforce of more than 70,000 people.

In 2019, AMEC, in partnership with DOLWD Research & Analysis, utilized labor market information to review the 2014 MOSI priority occupations as a first step in developing this Action Agenda. The review yielded similar results and affirmed the maritime industry's ongoing importance to Alaska's economy. Following the analysis, AMEC brought together maritime industry stakeholders in the fall of 2019 to review and provide feedback on the priority occupations. AMEC members utilized industry input along with the labor market data and their local/regional knowledge to identify MOSI priority occupations for action planning over the next five years, as shown in Appendix B.

As of this writing in summer of 2020, with the state's economy in a severe decline due to plummeting oil prices and the COVID-19 pandemic, the future of any particular industry remains to be seen. However, it is hard to imagine that the state's dependence on maritime activity will decrease, given Alaska's 34,000 miles of coastline (more than all other states combined), coastal borders on three seas, more inland water than any other state, and the Arctic opening to more shipping and travel each year. This Action Agenda is based on data, industry input, and the premise that Alaska will continue to need skilled mariners and maritime industry support workers for the ashore and afloat jobs that will help reinvigorate, sustain, and grow the state's economy.

» II. ACTIVITIES SINCE 2014



Many groups around the state are committed to strengthening the maritime industry and ensuring Alaskans have the training and skills needed to fill the state's maritime jobs. Partnerships have been and will remain key to implementing the plan and creating positive outcomes. The following activities, organized according to the 2014 Plan strategies, while not meant to be a comprehensive list, are representative of Alaska's continuing work to build a maritime workforce.

Strategy 1: Grow awareness of occupations and develop career pathways.

- Maritime Works, an industry advisory group that operates under the auspices of the Alaska Safety Alliance (ASA), hosts a dedicated website for maritime career information.² It provides information about the careers prioritized in the 2014 Plan and includes printable flyers for a variety of maritime occupations.
- » Maritime training and occupational pathways are highlighted on a number of

other websites, including the DOLWD,³ AVTEC,⁴ UA,⁵ and Alaska Marine Safety Education Association.⁶

^{2 &}lt;a href="https://www.alaskasafetyalliance.org/explore-careers/maritime-careers/">https://www.alaskasafetyalliance.org/explore-careers/maritime-careers/

^{3 &}lt;a href="https://labor.alaska.gov/maritimeplan/">https://labor.alaska.gov/maritimeplan/ and https://akdoltest.ayera.net/occ/maroccs.cfm

^{4 &}lt;a href="https://avtec.edu/maritime">https://avtec.edu/maritime

^{5 &}lt;a href="https://www.alaska.edu/fsmi/training-employment/">https://www.alaska.edu/fsmi/training-employment/

^{6 &}lt;a href="https://www.amsea.org/">https://www.amsea.org/

- » Alaska Maritime Training Center (AMTC) at AVTEC:
 - Developed three distinct career pathways for United States Coast Guard (USCG) approved employment aboard vessels: Master/Mate Seafarer, Able Seaman Seafarer, and Junior Engineer Seafarer, each leading to licensed credentialing that meets requirements of both the USCG and the International Convention of Standards of Training, Certification and Watchkeeping (STCW).
 - o Implemented Introduction to Nautical Skills, a local and online high school course that is a part of the Young Mariner Training Program offered to high schools across the state. AVTEC's Senior Year to Career pathway allows high school students in the program to receive USCG credentialing and training while still in high school. Many students are already employed in a lucrative maritime career before they graduate.
 - Partners with secondary career and technical education (CTE) programs to provide dual enrollment/dual credit opportunities for high school students.

» UA:

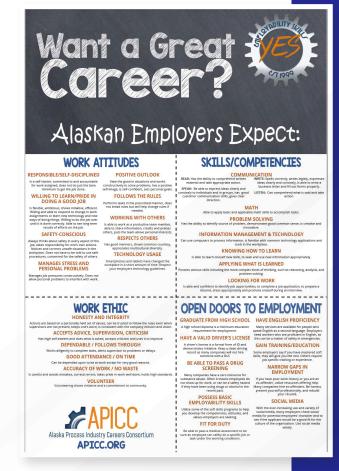
- O UA programs collaborate with K-12 to support dual enrollment opportunities that expand career awareness of maritime occupations.
- UAA Kachemak Bay Campus opened its vessel maintenance courses to high school students and began collaborating with the Homer-based Marine Trades Association to promote maritime careers, job opportunities, and training at the college, and to jointly offer scholarships.
- UAA Kachemak Bay Campus collaborated with UAS-Ketchikan to offer unique career pathways including Master/Mate 200 ton, Able Seaman, and Qualified Member of the Engine Department/Oiler. Each pathway includes classes that result in USCG approved

credentials, Occupational Endorsements, and an Associate of Applied Science (AAS) degree.

 UAF Bristol Bay Campus, in partnership with the Alaska Sea Grant Marine Advisory Program, expanded its Maritime Technical Program by developing a pathway for entrylevel fisheries jobs and career exploration for high school and postsecondary students.

Strategy 2. Improve workforce readiness.

» ASA's "YES! Employability Skills" program⁷ provides lesson plans and assessment resources to high schools. In 2016, ASA led a full industry review and vetting of the YES Employability Skills standards and updated/redesigned the YES posters and curriculum. Over the summer of 2020, ASA, in partnership with UA and the Department of Education and Early Development, launched an online course that can be offered through various platforms and includes a dual enrollment option for high school students through the University of Alaska Fairbanks.



- **»** The Alaska Workforce Investment Board highlights the importance of soft skills and increasing awareness about potential barriers to employment, such as drug use and criminal record, 8 as a critical piece of workforce readiness.
- » UAS-Ketchikan's construction math course was developed specifically for local shipyard training, and their High School Completion Programs (GED) enhance the readiness of the local workforce.
- » AMTC at AVTEC embeds employability skills into every maritime program. The Marine Vessel Maintenance and Repair program includes training for Shipyard Competent Person, Marine OSHA for employability, and safety skills.

Strategy 3. Train Alaskans for maritime careers.

- **»** AMTC at AVTEC:
 - O A USCG-approved training facility that offers over 70 maritime industry trainings and certifications in afloat and ashore careers. Training facilities include three world class full mission bridge simulators, a state of the art computer-based navigational laboratory, and an industry recognized fire safety training field and simulator. Training is offered on-site and via distance technologies.
 - One of the only schools in the United States that offers comprehensive training for Polar Operation/Navigation.
 - Develops and delivers custom industry-specific and vesselspecific training as requested, and trains employees for the ashore marine service industry through its comprehensive Marine Vessel Repair and Maintenance program.
 - O Has many agency, industry, and school district partners who provide alternative sites that are USCG approved for maritime course delivery and proctored examinations. This has greatly increased the statewide maritime training footprint and allows AMTC to take the training to the student, making a significant impact in rural Alaska.
 - O Ensures its training programs are upto-date and compliant with current USCG and International Maritime Organization (IMO) standards. The IMO programs meet the international training standards for mariners operating unlimited tonnage vessels or those operating on international voyages.

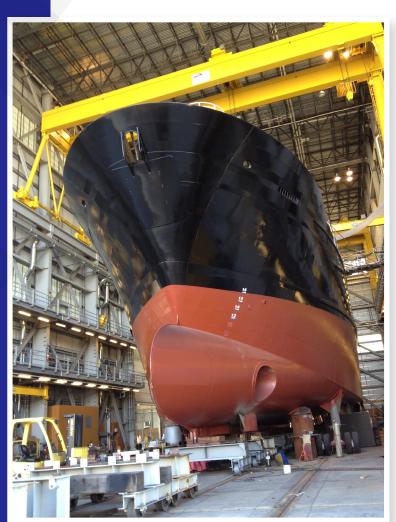


Photo courtesy of Chris Olson

- O UA offers dozens of maritime training programs⁹ across as many campuses and even more communities around the state. Students may earn a variety of Occupational Endorsements and Certificates or Associate, Bachelor, and advanced degrees in maritime-related programs. On average, 3,000 students annually complete training or
 - a degree in one of UA's fisheries, maritime, or seafood harvesting/processing programs.
- O UA has partnerships within its programs/campuses and with other entities to make maritime training more accessible. These include sharing instructors and facilities where possible; working with private sector employers and governmental and non-governmental partners to provide industry training specific to the locality; credit transfer policies and agreements; dual enrollment



Photo courtesy of AVTEC

- programs with high schools; and working with AVTEC to obtain US Coast Guard approval for maritime classes and testing.
- UAA Kachemak Bay Campus offers nine courses ranging from Outboard Motor Maintenance to a USCG certification 100 ton course, which directly address the needs of the Homer maritime workforce.
- O University of Alaska Southeast Maritime Training Center¹⁰ in Ketchikan offers USCG/STCW approved courses in both the deck and engineering department, updating its curriculum regularly to comply with the most recent USCG standards. The training center houses a Maritime Ship Simulator and navigation lab and was recently upgraded by Transas Wärtsilä to Full Mission Bridge standards to meet the growing training needs of the maritime industry.

Strategy 4. Support recruitment and retention.

- **»** Funding from Alaska's 2015 Sector Partnership-National Emergency Grant was provided to the Alaska Safety Alliance (ASA) to establish maritime work-based learning programs, including partnering in the Advancing Alaskan Workers initiative at Vigor Alaska Shipyard in Ketchikan, which resulted in an employer-sponsored Registered Apprenticeship program.
- » In 2017, Calista Corporation, AVTEC, and the USDOL Alaska Office of Apprenticeship partnered to implement Registered Apprenticeship Programs for mariners in the deck, engine, and galley departments.
- AVTEC has strong industry engagement for recruitment and retention through its Industry Advisory Committees for both the Alaska Maritime Training Center and the Vessel Repair and Maintenance Program. Comprising individuals from all corners of the maritime industry, each represent different training/employment needs, recruitment to the programs, and a direct pathway to employment for graduating students.
- **»** UA partners with industry through advisory boards 1) to promote educational programs that help fulfill their workforce needs and 2) for input on professional development opportunities

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to help retain employees who aspire to advance their careers. UA's maritime programs are engaged with local industry partners to provide internships and/or employment for students and graduates.

Strategy 5. Promote sustained industry engagement.

- **»** The Alaska Workforce Investment Board, whose membership is predominantly composed of industry and training representatives, endorsed the Alaska Maritime Workforce Development Plan in 2014¹¹ and continued its support of Career and Technical Education with its 2018 Alaska CTE Plan Addendum, ¹² which highlights several industries including maritime.
- » Maritime Works¹³ was formed as an evolution of the Alaska Maritime Workforce Industry Advisory Committee to support implementation of the Plan to sustain industry engagement. It is now fully embedded within ASA and functions as the maritime-specific advisory committee within the ASA structure with oversight from the Board of Directors.
- » Alaska's Ocean Cluster Initiative¹⁴ brings together industry, academia, non-profits, and public entities to promote and grow Alaska's ocean economy.
- » Alaska's ten Regional Economic Development Organizations, ¹⁵ or ARDORs, are exceptionally knowledgeable about and active in their specific regions. Just one example of maritime-related ARDOR activity is found in the work of Southeast Conference, ¹⁶ which maintains an active Transportation Committee and a robust presence on the Marine Transportation Advisory Board, both of which focus on the Alaska Marine Highway System (AMHS).
- » AMTC at AVTEC:
 - O Both AMTC and the Vessel Repair and Maintenance Program have strong industry engagement through Industry Advisory Committees that are actively involved in curriculum development, recruitment, and resource allocation.
 - The most recent ashore training program, Marine Vessel Maintenance and Repair, was developed as a result of local and statewide shoreside repair employers making an appeal to then-Governor Bill Walker, who turned to the AMTC to answer the call. Employers were actively involved and engaged in curriculum development, ensuring the skills that they need in their workforce are part of the training.
- » UA:
 - O UA maritime programs partner with industry advisory boards for their input on emerging and current workforce needs that inform program development or expansion, and for recommendations on curriculum development to ensure industry standards are met.
 - O UAS-Ketchikan has strong marine industry engagement, including the AMHS, Southeast Alaska Sea Pilots Association, Allen Marine Tours, Vigor Alaska, and many other local companies to facilitate training and employment. They worked closely with industry to revise their welding curriculum to meet the needs of local shipyards and partnered with AMHS and Vigor Alaska to develop the Qualified Member of the Engine Department (QMED) Maritime Multi-Skilled worker program. UAS-Ketchikan also partners with AMHS to provide engine room internships for QMED students to complete their sea time.
 - UAA Kachemak Bay Campus (KBC) is an active participant in the Homer Marine Trades organization that brings together boat repair, welding, carpentry, hauling and storage, maintenance and repair, sales, survey, and charter organizations. Connections with local industries allow the KBC campus to collaboratively offer just-in-time training, workshops, and meetings.

^{11 &}lt;a href="https://awib.alaska.gov/forms/res-14-08.pdf">https://awib.alaska.gov/forms/res-14-08.pdf

^{12 &}lt;u>https://awib.alaska.gov/CTE_Addendum_10-2018.pdf</u>

^{13 &}lt;a href="https://www.alaskasafetyalliance.org/asa-programs/maritime-works/">https://www.alaskasafetyalliance.org/asa-programs/maritime-works/

^{14 &}lt;u>https://www.alaskaoceancluster.com/</u>

^{15 &}lt;a href="https://www.commerce.alaska.gov/web/dcra/ARDORs.aspx">https://www.commerce.alaska.gov/web/dcra/ARDORs.aspx

^{16 &}lt;a href="http://www.seconference.org/">http://www.seconference.org/

» III. AMEC ACTION AGENDA 2020–2025

Following the re-analysis of maritime labor market information and the gathering of industry feedback, both of which affirmed priority Marine Occupations and Support Industries (MOSI)

occupations, AMEC members developed ideas for projects to support workforce development for those occupations. They created an inventory of available assets such as facilities and equipment, curricula, instructors, advisory committees, financial, other resources; discussed strategic opportunities on the horizon; and then identified projects that use assets to leverage opportunities, support AMEC's mission and vision, and align with the 2014 Maritime Workforce Development Plan (MWDP) Strategies.



Photo courtesy of University of Alaska

AMEC's priority action projects are described below.

Develop a coordinated effort to use alternative delivery methods* for providing USCG-approved courses and testing at approved sites, and expand this into other certifying courses in the marine services industry. * other than traditional in-person classroom instruction.
Strategy 3. Train Alaskans for maritime careers.
Able Seaman; Captain; Engineer; Mate; Qualified Member of the Engine Department; Steward; Vessel Repair and Maintenance Service Provider.
Integrate USCG training among UAS-K, AVTEC, and KBC, including: making credit available for students at all three locations; approval of facilities and instructors; sharing resources; collaborating to provide training that is accessible in all areas of the state; investigating possible apprenticeship program opportunities.
Strategy 3. Train Alaskans for maritime careers.
Able Seaman; Captain; Engineer; Mate; Qualified Member of the Engine Department; Steward.

Partner with Maritime Works through the Alaska Safety Alliance (ASA) to maintain and utilize career resources that expand awareness of maritime occupations and available training; utilize ASA's VISTA Volunteer to improve occupation listings in AKCIS and to expand career awareness through events such as conferences, trainings, etc.		
Strategy 1. Grow awareness of occupations and develop career pathways.		
All maritime occupations.		
Identify and leverage resources to increase maritime career awareness and opportunities for high school students by: developing and/or expanding high school maritime curriculum, including alternative delivery methods and dual enrollment/credit opportunities; aligning terminology across curriculums and programs; incorporating tools to assist students with career exploration (i.e. Alaska Career Information System).		
Strategy 1. Grow awareness of occupations and develop career pathways. 1.4 Implement career pathways methodology in K-12 and beyond.		
All maritime occupations.		
Develop a coordinated (integrated) process to deliver Occupational Endorsement Certificate courses based on American Boat and Yacht Council (ABYC) standards, including developing dual enrollment programs with high schools, across the state.		
Strategy 3. Train Alaskans for maritime careers. 3.3 Improve access to training/education programs.		
Marine Electrician; Marine Mechanic; Marine Technician; Refrigeration Engineer or Technician.		
Finalize implementation of outboard engine "train the trainer" sessions in Alaska, in which participants may become certified technician trainers and/or technicians, to result in training opportunities across the state led by certified Alaskan trainers.		
Strategy 3. Train Alaskans for maritime careers. 3.3 Improve access to training/education programs.		
Marine Electrician; Marine Mechanic; Marine Technician; Refrigeration Engineer or Technician.		

» APPENDIX A: ACRONYMS

Acronym	Full Name	Website if applicable
AAS	Associate of Applied Science Degree	
ABYC	American Boat and Yacht Council	https://abycinc.org/
AKCIS	Alaska Career Information System	https://acpe.alaska.gov/PLANNING/AKCIS
AMEC	Alaska Maritime Education Consortium	https://www.alaska.edu/fsmi/
AMHS	Alaska Marine Highway System	http://dot.alaska.gov/amhs/
ASA	Alaska Safety Alliance (formerly APICC), which houses Maritime Works	https://www.alaskasafetyalliance.org/
AVTEC	Alaska Vocational Technical Center	https://avtec.edu/
AWIB	Alaska Workforce Investment Board	https://awib.alaska.gov/
FSMI	Fisheries, Seafood, Maritime Initiative	https://www.alaska.edu/fsmi/
IMO	International Maritime Organization	http://www.imo.org/en/Pages/Default.aspx
KBC	Kachemak Bay Campus (UAA/Kenai Peninsula Campus)	https://kpc.alaska.edu/student-life/student-re- sources/kachemak-bay-campus-student-en- rollment-services.cshtml
MOSI	Marine Occupations and Support Industries	http://www.alaska.edu/files/fsmi/AK-Maritime- Workforce-Dev-Plan High-Res 5-22-14.pdf
REM	Research, Enhancement, and Management	http://www.alaska.edu/files/fsmi/AK-Maritime- Workforce-Dev-Plan_High-Res_5-22-14.pdf
SHP	Seafood Harvesting and Processing	http://www.alaska.edu/files/fsmi/AK-Maritime- Workforce-Dev-Plan High-Res 5-22-14.pdf
STCW	Standards of Training, Certification and Watchkeeping	https://www.dco.uscg.mil/nmc/stcw/
UA	University of Alaska	https://www.alaska.edu/alaska/
UAA	University of Alaska Anchorage	https://www.uaa.alaska.edu/
UAF	University of Alaska Fairbanks	https://www.uaf.edu/uaf/
UAS	University of Alaska Southeast	https://www.uas.alaska.edu/
UASK	University of Alaska Southeast- Ketchikan	https://www.uas.alaska.edu/ketchikan/
USCG	US Coast Guard	https://www.dco.uscg.mil/national_maritime_center/

APPENDIX B: AMEC PRIORITY OCCUPATIONS MARINE OCCUPATIONS AND SUPPORT INDUSTRIES SECTOR

Ship/Boat Building, Repair, Maintenance

- Fiberglass or Metal Fabricator
- Marine Electrician
- Marine Mechanic (Diesel, Gas Engine, Outboard Engine)
- Marine Technician (includes Hydraulics and Electronics)
- Port Maintenance Mechanic
- Refrigeration Engineer or Technician
- Shipyard Laborer
- Vessel Repair and Maintenance Service Provider
- Welder

Vessel Operations

- Able Seaman
- Captain Limited License < 500 Ton (Charter/Tour Boat)
- Captain Unlimited License > 500 Ton
- Engineer, Licensed or Unlicensed
- Mate, Licensed
- Qualified Member of the Engine Department
- Steward



Photo courtesy of University of Alaska