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Maritime Administration

Evaluating the Availability of Federal Financial Assistance for Merchant Mariner Training

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The study seeks to determine whether Federal financial assistance programs are available to support mariner education and training, and to identify whether there are any inherent barriers that limit an individual's access to those programs for training leading to or augmenting an existing mariner credential.

15. SUBJECT TERMS
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List of Acronyms, Initialisms, and Abbreviations

Term	Definition
AB	Able Seaman
AJC	American Job Center (program funded by the Department of Labor)
BJA	Bureau of Justice Assistance (Department of Justice)
CFR	Code of Federal Regulations
CMTS	U.S. Committee on the Marine Transportation System
CoE	Center of Excellence for Domestic Maritime Workforce Training and Education; plural form: CoEs
DHS	U.S. Department of Homeland Security
DoD	U.S. Department of Defense
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
E&T	Education and training
ED	U.S. Department of Education
FAFSA	Free Application for Federal Student Aid
FSEOG	Federal Supplemental Educational Opportunity Grant
FY	Fiscal year
GRT	Gross Register Tons
IMO	International Maritime Organization
M2M	Military to Mariner (program)
MARAD	Maritime Administration
MERPAC	Merchant Marine Personnel Advisory Committee
MMC	Merchant Mariner Credential (issued by the U.S. Coast Guard)
MTC	Maritime training center
MTSNAC	Marine Transportation System National Advisory Committee
MV	Motor vessel
NMC	National Maritime Center (of the U.S. Coast Guard)
NSMV	National Security Multi-Mission Vessel
OICEW	Officer-in-Charge of an Engineering Watch (an engineering officer position)
OICNW	Officer-in-Charge of a Navigational Watch (a deck officer position)
PSOEA	Public Safety Officers' Education Assistance
QMED	Qualified Member of the Engine Department (an unlicensed engineering position)
RFPEW	Rating Forming Part of an Engineering Watch (an entry-level unlicensed engineering position)
RFPNW	Rating Forming Part of a Navigational Watch (an entry-level unlicensed deck position)
ROTC	Reserve Officer Training Corps
SIP	Student Incentive Payment
SMA	State Maritime Academy; plural form: SMAs

Term	Definition
SNAP	Supplemental Nutrition Assistance Program
SOCP	Ship Operations Cooperative Program
SSMP	Strategic Sealift Midshipman Program
SSOP	Strategic Sealift Officer Program
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
SUNY	State University of New York (e.g., SUNY Maritime College)
TWIC	Transport Worker Identification Credential (issued by the Department of Homeland Security)
TS	Training ship
TSA	Transportation Security Administration
U.S.C.	United States Code
USCG	U.S. Coast Guard
USMMA	U.S. Merchant Marine Academy
USN	U.S. Navy
USTRANSCOM	U.S. Transportation Command (a unified combatant command of the Department of Defense)
VA	U.S. Department of Veterans Affairs
VETS	Veterans Education and Training Service (of the U.S. Department of Labor)
WIOA	Workforce Innovation and Opportunity Act

Notes on Usage and Terminology

This report seeks to use common and contemporary terminology. However, there may be specific instances where there may be ambiguity. These might include the following:

- *Merchant Marine Credential* (MMC) vs. *U.S. Coast Guard* (USCG) *License*. Although the phrase *USCG License* is considered a legacy term, its use remains common within the maritime community. The USCG issues the MMC in accordance with Federal regulations. Each MMC describes the type(s) of vessel(s), tonnage(s), horsepower(s), and waters (routes) for which the mariner is qualified. For service in international waters, the MMC would include appropriate endorsements according to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). The MMC replaced several other documents, including the Merchant Mariner's Document, merchant mariner license, Certificate of Registry, and separate STCW Certificates.

- *Inland* vs. *near coastal* vs. *oceans* vs. *international waters*. These boundaries are established through international treaties and are described in Title 33, Code of Federal Regulations (CFR). 33 CFR, Part 80 establishes the demarcation lines that delineate those waters upon which mariners shall comply with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) and those waters upon which mariners shall comply with the Inland Navigation Rules. The waters inside of the lines are Inland Rules waters. The waters outside the lines are COLREGS waters. COLREGS waters are further divided into near-coastal waters (ocean waters not more than 200 miles offshore from the

United States and its possessions) and oceans (i.e., international waters) (46 CFR § 10.107, Definitions).

These same delineations are used to categorize or classify merchant mariner credentials. Generally, an oceans credential is also valid for near coastal and inland routes, and a near coastal credential is valid for inland routes but not on ocean routes. Similarly, an inland credential is only valid on inland routes. There are some exceptions, such as for service on Western Rivers (a network of the Mississippi River and certain other waters) or as a harbor pilot.

- *Ratings* vs. *unlicensed*. *Ratings* is the internationally accepted term for merchant mariners who serve in positions other than shipboard officers. It is also the term used within the U.S. Code and the Code of Federal Regulations. Since these individuals hold credentials other than a USCG license (see above), they are often referred to within the maritime industry as *unlicensed* personnel.
- *Cadets* vs. *students* vs. *midshipman*. Different terms may be used to describe an individual enrolled in a USCG-approved course of instruction leading to a merchant mariner credential. They are all generally interchangeable, and all are *students*. A student working on a ship is often referred to as a *cadet*. Individuals enrolled in certain union training schools are also referred to as cadets. A student who is also enrolled in the U.S. Navy Reserve's Strategic Sealift Officer program, which is mandatory at the U.S. Merchant Marine Academy or voluntary participation at a State Maritime Academy, is additionally appointed to the rank of *midshipman*.
- *School ship* vs. *training ship* vs. *training vessel*. For the purposes of this report, these terms are generally interchangeable. Usage may vary from institution to institution or from user to user.
- *Sea time* vs. *sea service*. These terms are interchangeable and identify a day of service aboard a training ship or commercial vessel that is credited towards fulfilling a credentialing requirement.
- *Ship* vs. *vessel*. These terms are interchangeable.
- *Unlimited license* vs. *limited license*. This report looks at a variety of mariner credentials. Credentials that allow mariners to serve on vessels without restrictions on vessel tonnage (for deck officers), vessel horsepower (for engineering officers), or routes (e.g., inland, near coastal, or oceans) are called *unlimited licenses*. Credentials that include any limitations on vessel type, tonnage, horsepower (e.g., limited to smaller tugboats, offshore supply vessels, or fishing vessels), or restrictions on routes are known as *limited licenses*.

Evaluating the Availability of Federal Financial Assistance for Merchant Mariner Training

Executive Summary

Over the last several years, the U.S. Department of Transportation's Maritime Administration (MARAD) has taken an in-depth look at issues and trends related to the supply of credentialed merchant mariners needed to operate vessels of the U.S.-flag merchant marine. These mariners—serving aboard vessels of all types—provide the transportation services critical to domestic and international commerce. The Department of Defense also relies on these mariners to crew vessels of the Nation's Ready Reserve Force to support national security operations.

MARAD has identified several factors that affect the accessions into the mariner workforce, the retention of fully qualified mariners within the industry, and the ability of holders of lower-level credentials (such as mates and assistant engineers) to advance to higher credentials (such as master or chief engineer). MARAD also examined the impact of the more stringent requirements of the 1995 amendments to the International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) on mariners working aboard vessels in international services.

One area that has not previously been examined in detail is whether Federal financial assistance is available and adequate to support individuals pursuing mariner education and training. At the direction of Congress, MARAD has undertaken this study to examine that issue.

Specifically, this study first seeks to identify Federal financial assistance programs that might be available to fund education and training for a variety of Merchant Mariner Credentials, including credentials for service in domestic waters and those needed for international service (where STCW endorsements are required). Second, the study seeks to identify whether there are any inherent barriers that limit certain individuals' access to specific Federal financial assistance programs for mariner education and training. The study also considers whether the choice of a credentialing path—such as a four-year college program at a maritime academy or a part-time program at a career school or maritime training center—affects access to Federal financial assistance programs.

The study also looks at what institutional vehicles—whether institutions of higher education, maritime training centers, or other entities—are available for mariner education and training. This evaluation will help determine whether these institutions participate in Federal financial assistance programs, and whether individuals attending these institutions could be eligible for such assistance programs.

PRINCIPAL FINDINGS

Several Federal departments administer programs that provide financial assistance for education and training, principally the Department of Labor (DOL), Department of Education (ED), and the Department of Veterans Affairs (VA). Other Federal departments, such as the Department of Defense (DoD) and Department of Transportation (DOT), offer programs that provide targeted support specifically for mariner education. Federal financial assistance programs are available for college-level programs, career and technical schools, and other career paths. These programs are available to veterans and their dependents, youth entering the workforce, displaced workers, and low-income applicants or those entering the workforce through public assistance programs

Overall, this study found that Federal financial assistance for mariner education and training appears to be adequate for some credentialing paths but inadequate for others. Collectively, there are a variety of funding sources available with a reasonable range of eligibility criteria. This suggests that there exists an adequate pool of potential applicants who are eligible to participate in at least one Federal financial assistance program.

The key gaps in the availability of Federal financial assistance are the following:

- First, it appears that there is limited access to Federal financial assistance programs for individuals pursuing a maritime credential through a path other than a full-time college, university, or maritime academy program. For example, an individual pursuing a limited credential through a maritime training center or proprietary (private or commercial) nautical school may have difficulty obtaining Federal financial assistance.

- Second, it appears that Federal financial assistance is generally not available for individuals who need education or training to renew or advance an existing mariner credential. These gaps are addressed in the report, which provides a detailed assessment of each financial assistance program.

With respect to determining whether inherent barriers exist that limit the candidate pool of mariners, we identified a number of factors that would prevent certain individuals from pursuing a maritime career or accessing Federal financial assistance. For example, the eligibility criteria for Transportation Worker Identification Credentials (TWIC) and Merchant Mariner Credentials (MMC) include age limitations, prohibitions based on certain prior criminal conduct or convictions, prohibitions based on certain medical conditions, and strict physical requirements (e.g., mobility, eyesight, and hearing). There are also inherent eligibility criteria that limit individual access to specific Federal financial assistance programs.

None of these barriers appears to place an excessive or unreasonable limit on the pool of potential mariners. We conclude that there exists an adequate pool of potential candidates who would be able to meet the eligibility requirements both to receive a mariner credential and to access one or more sources of Federal financial assistance.

As described throughout this report, extensive and detailed information resources exist that detail the various Federal financial assistance programs that are potentially available for mariner education and training. Each of the Federal agencies (or their State partners, in the case of DOL-funded programs) have comprehensive websites that lay out their respective programs' eligibility criteria, application processes, and other details. Consequently, we assess that the level of information is adequate.

Unfortunately, it was often challenging to access available information. No focused information resource exists to "connects the dots" between Federal funding and mariner training. It was difficult in some cases to determine with confidence whether a particular financial assistance program could be used to pay for mariner education or training. Increased communication and coordination across Federal and State agencies—using an all-of-government approach—could significantly improve the effectiveness of existing resources. MARAD can pursue several paths to strengthen outreach and awareness efforts to promote maritime careers and expand the use of existing Federal financial assistance programs for maritime education and training.

PRINCIPAL RECOMMENDATIONS

We identified four general areas where MARAD could take steps to improve the usefulness of and access to existing Federal financial assistance programs, and promote greater awareness and outreach to potential participants and existing credentialed mariners.

Recommendation 1: Strengthen awareness and access to existing Federal financial aid resources and career development programs.

This study found several existing Federal financial aid programs available to individuals that can be used to pursue mariner education and training. However, awareness of those programs could be improved by a more coordinated, all-of-government approach to integrating and sharing information. The four sub-elements of this recommendation offer possible ways to improve dialog and communication, and increase awareness and outreach of existing programs and resources across Federal and State governments.

Recommendation 2: Promote the Centers of Excellence for Domestic Maritime Workforce Training and Education program.

The Centers of Excellence for Domestic Maritime Workforce Training and Education program is in its early stages of development. Consequently, there is an opportunity to establish a set of goals and objectives that address the strategic interests of MARAD, DOT, and Congress to expand mariner training opportunities and career paths.

Recommendation 3: Promote and strengthen the Military to Mariner program.

The Military to Mariner (M2M) program appears to hold significant potential as an accession source for credentialed mariners. The basic framework is in place for the M2M program to provide information on maritime careers to transitioning service members and veterans. Additional coordination and dialog with the DOL Veterans' Employment and Training Service and its State agency partners, ED, and the VA could help increase awareness of the M2M initiative within Federal agencies that assist veterans.

Recommendation 4: Further study and evaluation.

This study identified one area where further research and assessment would better inform Federal policy and decision-making. Specifically, MARAD could evaluate whether there is a need for a new Federal financial assistance mechanism targeted to specified sets of individuals that could address known shortfalls in the maritime industry and gaps in Federal financial assistance programs that potentially perpetuate those shortfalls. As MARAD develops its merchant mariner recruitment, training, and retention strategic plan, the agency should evaluate these issues to support that effort.

(Credit: U.S. Merchant Marine Academy)

1. Background and Purpose

The Department of Transportation (DOT) is responsible for supporting mariner education and training under the authority of 46 U.S.C. § 51103: "The Secretary of Transportation may provide for the education and training of citizens of the United States for the safe and efficient operation of the merchant marine of the United States at all times, including operation as a naval and military auxiliary in time of war or national emergency." Within DOT, the Maritime Administration (MARAD) is delegated responsibility for developing and administering those programs.

Over the last several years, MARAD has issued a number of studies that explored general issues and trends related to the mariner workforce. These included the following reports.

- "Merchant Mariner Training to Meet Sealift Requirements" (August 2004);
- "Strengthening Skills Training and Career Pathways Across the Transportation Industry" (co-authored by the Department of Defense, Department of Transportation, and Department of Education; August 2015);
- "Maritime Workforce Working Group Report" (2017); and
- "Opportunities and Challenges to Increasing the Number of United States Coast Guard Credentialed Mariners" (Report to Congress; May 2020).

These reports identified factors that have influenced the U.S.-flag merchant marine fleet, accessions into the mariner workforce, the retention of fully qualified mariners within the industry, and the ability of holders of lower-level credentials to advance to higher credentials. Several of these studies also assessed whether there were sufficient fully qualified mariners to crew the nation's Ready Reserve Force for purposes of national security.[1]

Some of the studies evaluated the impact of the 1995 amendments to International Convention on the Standards of Training, Certification and Watchkeeping for Seafarers (STCW) on credentialing. Other studies identified potential gaps in the career accession paths for mariners and made recommendations to address those gaps. For example, in the 2004 report, MARAD recommended the implementation of additional apprenticeship programs for unlicensed mariners.[2]

One area that has not been examined in detail is whether Federal financial assistance is available and adequate to support individuals pursuing mariner education and training. At the direction of Congress, MARAD has undertaken this study to examine that issue and identify whether there are inherent barriers that limit access to Federal financial assistance programs that support training that leads to a mariner credential.

The findings and recommendations of this study are intended to address the strategic goals and objectives of the Administration, DOT, and MARAD. These include:

[1] For the purposes of this study, a "fully qualified mariner" capable of serving in the Ready Reserve Fleet is defined as an individual who holds: 1) a current and valid unlimited tonnage or unlimited horse power oceans license without limitations and meets the required STCW standards; and 2) a current and valid Transportation Worker Identification Credential (TWIC).

[2] U.S. Department of Transportation Maritime Administration, "Merchant Mariner Training to Meet Sealift Requirements," August 2004, available at https://www.maritime.dot.gov/sites/marad.dot.gov/files/docs/resources/3756/mrrrpttocongress8-2004-tjones.pdf.

- **Strengthening the commercial economy through a skilled, highly qualified merchant mariner workforce;**
- **Improving transportation safety**[3] …by providing highly trained credentialed mariners to operate U.S.-flag vessels on our inland, coastal, and ocean waters;
- **Expanding vocational education, credentialing, and career opportunities for military veterans transitioning to commercial maritime service**;[4] and,
- **Improving education and technical training pathways for candidates seeking commercial maritime credentials.**

(Credit: Maritime Administration)

[3] "The U.S. DOT Secretary's Priorities to Improve Our Transportation System," U.S. Department of Transportation, web, available at https://www.transportation.gov/priorities.

[4] Department of Veterans Affairs, FY 2018–2024 Strategic Plan, Department of Veterans Affairs, web, available at https://www.va.gov/oei/docs/va2018-2024strategicplan.pdf.

2. Congressional Requirement

This study was undertaken in accordance with provisions of the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Pub. L. 116-283, Section 3508(c)):

> *"(c) STUDY AND REPORT ON FINANCIAL ASSISTANCE FOR TRAINING MERCHANT MARINERS.—*
>
> *(1) STUDY REQUIRED.—The Administrator of the Maritime Administration, in coordination with the Secretary of Education, the Secretary of Labor, and the Secretary of Veterans Affairs, shall conduct a study to—*
>
> *(A) identify Federal financial assistance available for the training of United States merchant mariners, including those working to receive a Standards of Training, Certification and Watchkeeping endorsement under subchapter B of chapter 1 of title 46, Code of Federal Regulations;*
>
> *(B) identify individuals eligible for assistance described in subparagraph (A); and*
>
> *(C) develop recommendations to improve licensed and unlicensed merchant mariner access to assistance described in subparagraph (A).*
>
> *(2) REPORT AND BRIEFING.—Not later than 180 days after the date of the enactment of this Act, the Administrator of the Maritime Administration shall—*
>
> *(A) provide to Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a briefing on the results of the study required under paragraph (1); and*
>
> *(B) make such results publicly available on an appropriate website."*

This study will form the basis of the Congressional report and briefing described in section (c)(2) above, which will be submitted separately.

3. Merchant Mariner Credentials and Career Paths

This section provides a high-level overview of the paths to becoming a credentialed merchant mariner to identify how Federal financial assistance programs are used for mariner education and training.

3.1. Merchant Mariner Credentials

The U.S. Coast Guard (USCG) is the Federal agency responsible for overseeing the merchant mariner credentialing process.[7] The USCG establishes sea service, training, and competency requirements; approves merchant marine training programs; and issues merchant mariner credentials. The USCG is solely responsible for establishing these standards for mariners aboard vessels serving in domestic waters, such as the Great Lakes, inland waters, and certain coastal areas.

For most vessels operating in international waters and certain vessels operating in coastal U.S. waters, mariners must meet both USCG standards and a set of international criteria known as the International Convention on Standards of Training, Certification and Watchkeeping Seafarers (STCW). These standards were developed by the International Maritime Organization (IMO), a specialized agency of the United Nations responsible for the safety and security of global shipping and the prevention of marine pollution.

The IMO issued the first STCW standards in 1978.[8] The STCW was amended in 1995 and 2010, and its provisions are incorporated by reference throughout USCG regulations. The STCW Convention describes requirements for theoretical knowledge, practical skills and demonstrated competence. It also establishes minimum levels of seagoing experience (time spent aboard ships) required for credentialing for mariners working aboard vessels in international service. The USCG uses the STCW Convention and its corresponding Code as the framework for structuring the credentialing programs for officers and ratings in international service and in other specific fields (such as for work aboard passenger vessels, or ships carrying dangerous liquids or hazardous materials).

The USCG requirements for all mariner credentials are described in Title 46, Code of Federal Regulations, Subchapter B—Merchant Marine Officers and Seamen (46 CFR Part 10 through 46 CFR Part 14). The regulations span more than 180 pages, and detail the specific requirements for various shipboard positions (e.g., master, chief engineer, chief mate, able seaman, and other ratings), areas of service (e.g., oceans, inland), and for certain specialized credentials. For this study, the requirements can be broken down into four general categories.

1. General Requirements. These are the basic prerequisites needed for original Merchant Mariner Credentials, renewals, or upgrades.
    - Must be a U.S. citizen (certain non-citizens admitted for residency can apply for credentials as a rating).
    - Age (minimum 19 years old for officers, 18 years old for ratings).
    - Must hold or be eligible for a valid Medical Certificate.
    - Must be in compliance with drug-free requirements.

[7] 46 U.S.C. § 2103, Superintendence of the merchant marine; 46 U.S.C. Subtitle II, Part E—Merchant Seamen Licenses, Certificates, and Documents.

[8] "International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978," web, available at https://www.imo.org/en/OurWork/HumanElement/Pages/STCW-Conv-LINK.aspx.

- Must hold or be eligible for a Transportation Worker Identification Credential (TWIC).

2. Sea Service. This represents the level of shipboard experience needed for a specific credential. The specific types and amount (in days) of sea service vary significantly by the credential sought.
   - Typically ranges from 180 days to 1040 days. (Entry-level deck and engine ratings do not require prior seagoing experience.)
   - Specific types of service may be required (e.g., routes/waters where applicant served, type of vessel, minimum tonnage, or minimum horsepower).
   - Time acquired through certain USCG-approved programs (such as those at the Federal and State maritime academies).
   - Recency (such as a minimum of 90 days of service in the past three years on vessels of appropriate tonnage or horsepower).
3. Existing Credentials and Training. These vary significantly by the credential sought.
   - For mariners seeking to obtain a higher-level credential, they need to possess the preceding lower-level credential. For example, an individual seeking a second mate's credential must hold a valid third mate's credential.
   - Completion of a comprehensive program of instruction or a specific set of training courses, as required for each specific credential. The USCG approves all training programs and individual training courses.
4. Examination. Virtually all levels of credentialing require passing an examination (administered by the USCG) or completing a USCG-approved training program.

3.2. Paths that Lead to a Merchant Mariner Credential

This section describes the pathways individuals may follow to acquire merchant mariner credentials. It addresses credentials for domestic service (e.g., coastal, inland, or river vessels) and unlimited credentials needed for service aboard ships in international service (which require an STCW endorsement).[9]

3.2.1. Credentialing Paths for Ratings Prior to the STCW Convention

Historically, the career path to an unlicensed rating credential was simple. Individuals would start as Ordinary Seamen (in the deck department) or Wipers (in the engine department). After serving at sea for three years and passing a USCG exam, these individuals could advance to the next and highest level rating credential as Able Seaman (deck) or Oiler (engine). After a further three years of service, these individuals would have the option of continued service as ratings or they could elect to pursue further advancement to become licensed (credentialed) officers.

3.2.2. Credentialing Paths for Officers Prior to the STCW Convention

Historically, there were two common paths to attain an unlimited officer's credential or license: coming up through the ranks or going to a maritime school. Coming up through the ranks (commonly referred to as "coming up the hawsepipe"), one might start as an Ordinary Seaman, serve at sea for three years, and

[9] This study is limited to education and training for credentials needed for service in the deck or engine departments aboard a vessel. There are other credentials necessary to serve in other departments such as the steward's department or for other specific shipboard positions.

then pass a USCG exam to become an Able Seaman. After serving three years as Able Seaman, one could take another USCG exam, pass, and become a Third Mate. With additional sea time and passage of additional USCG examinations, one could eventually achieve the level of Master. (A similar path exists for engine ratings to become engine officers.)

The hawsepipe path was also commonly used to acquire a limited license (i.e., a credential that limits the holder to service aboard vessels of a certain type, tonnage, or horsepower, or in a specific set of waterways). For example, an Ordinary Seaman serving as a deckhand on a harbor ferry might seek to become a Mate and remain in the ferry industry. Alternatively, an individual serving as a Qualified Member of the Engine Department (QMED) on an offshore supply vessel (OSV) might seek to advance to Assistant Engineer aboard OSVs.

Individuals following these hawsepipe paths could enroll in "license preparation" programs to help prepare them for the questions they would encounter on the USCG examination. However, participation in these programs was voluntary. There was no additional coursework or study necessary or required; only sea service and successful completion of the requisite USCG exam were needed for an individual to advance from rating to officer.

An alternative path towards an unlimited credential was through a maritime academy or nautical school. These programs primarily produced deck or engine officers with unlimited credentials. Via this path, an individual would start as a cadet and then participate in a comprehensive program of classroom study and hands-on experience, typically spanning four years or more. Cadets would gain sea time aboard a training ship or while sailing as a deck cadet or engine cadet aboard a commercial merchant vessel. Upon completing the program, the individual would take a USCG license exam and receive a credential as third mate or third assistant engineer.

This framework is still in place at the Federal and State maritime academies. Each of these institutions has also augmented their curricula to meet the requirements for an accredited baccalaureate degree. Broadly speaking, the combination of intensive, directed classroom and laboratory instruction and practical experience gained while serving aboard an operating vessel (whether a training ship or commercial vessel) is embedded within these four-year college programs.

3.2.3. Credentialing Paths Following Implementation of the STCW Convention

Since the implementation of the STCW Convention in 1978, credentialing paths for ratings and officers operating in most domestic services have remained relatively unchanged. There have been changes in the process (e.g., an individual must now obtain a TWIC), and requirements for knowledge and experience in specific disciplines may have increased. However, both the hawsepipe and nautical school paths remain accessible for domestic-service credentials.

For ratings and officers in international service, credentialing requirements have become significantly more prescriptive since the implementation of the STCW Convention. Under the prior framework, the USCG used the accumulation of sea time and the examination process as the sole means of documenting experience and proving knowledge. Under the terms of STCW, an individual must now *demonstrate* their knowledge and competence across a set of skills commensurate with the specific credential(s) sought.

Typical competencies include the ability to launch, command, and retrieve a lifeboat; successful operation of a radar set or automated radar plotting aid (ARPA); loading or discharging liquid cargoes; or starting up and securing a diesel engine, steam plant, or gas turbine. Mariners may demonstrate some competencies to a ship's officer while in service aboard a ship, but other competencies must be demonstrated before a qualified instructor, typically in a classroom, simulator, or laboratory setting. While there is some overlap with the skills needed for the underlying credential (e.g., able seaman, third mate, or third assistant engineer), sets of specific STCW competencies are organized as endorsements to the underlying credential.

For service in international waters, unlicensed ratings are required to hold an STCW endorsement either as a Rating Forming Part of an Engineering Watch (RFPEW) (for rating positions in the engine department) or as a Rating Forming Part of a Navigational Watch (RFPNW) (for rating positions in the deck department). For officers in international (oceans) service, they are required to hold an STCW endorsement either as an Officer-in-Charge of an Engineering Watch (OICEW) (for all engineering officer positions) or as an Officer-in-Charge of a Navigational Watch (OICNW) (for all deck officer positions).

3.2.4. Impact of STCW on Mariner Education and Training

The implementation of the STCW Convention represented a sea change in the credentialing of mariners serving in international waters. While there was a transition period and some exemptions granted for certain personnel or positions, the most significant impact was that sea time and USCG examinations alone were no longer sufficient to obtain a mariner credential. The STCW Convention represented a more prescriptive approach, necessitating substantial changes to existing mariner education and training programs. The demonstration of competency became a requirement, certain subjects were assigned mandatory class hours, and new subject matter was added to program curricula. Many institutions developed entirely new programs to address the requirements of the new standards and meet the sudden demand for supplemental training of existing mariners.

While the new framework did not eliminate the hawsepipe route to credentialing outright, it made it far more challenging and costly for mariners seeking international (ocean) credentials. Individuals must now supplement their sea service and USCG examination with a number of USCG-approved training courses that lead to an STCW endorsement. (Each USCG-issued credential for mariners serving in international waters has its own set of required STCW endorsements.)

There are additional Federal initiatives that affect mariner training and credentialing in both international and domestic service—rivers, inland waters, and the Great Lakes, where the STCW Convention is generally not applied. For example, the Oil Pollution Act of 1990 (Pub. L. 101–380) introduced pollution prevention and response training requirements. Similarly, the Maritime Transportation Security Act of 2002 (Pub. L. 107–295) introduced vessel and facility security training requirements for both shipboard and shoreside personnel.[10] These and other Federal laws and regulations have incrementally added to the overall training requirements for mariners.

[10] See also 46 CFR, Part 104.

4. Education and Training Institutions Available for Mariners

This section describes the different types of institutions engaged in the education and training of merchant mariners. The primary sources of this information are the U.S. Coast Guard National Maritime Center (as of May 2021) and the Maritime Administration.

4.1. Maritime Academies

The Department of Transportation (DOT) is responsible for supporting mariner education and training under the authority of 46 U.S.C. § 51103. Responsibility is delegated to the Maritime Administration (MARAD) to develop and administer DOT's mariner training programs in accordance with its statutory mission to "foster, promote, and develop the merchant maritime industry of the United States."[11] MARAD's objective is to ensure a consistent supply of capable, well-trained merchant mariners to crew the ships of the U.S.-flag merchant marine, to maintain U.S. national and economic security.[12]

The U.S. has seven institutions of higher education whose primary mission is the training of merchant marine officers (see Table 4-1). MARAD has direct responsibility for the operation of one Federal institution, the U.S. Merchant Marine Academy (USMMA), and administers that program in accordance with the requirements of 46 CFR Part 310, Subpart C. In addition, MARAD has designated six institutions as "state maritime academies" (SMAs); MARAD provides program oversight and financial support in accordance with the provisions of 46 CFR Part 310, Subpart A. Together, the seven maritime academies graduate approximately 1,098 merchant mariners credentialed for international service each year.

Table 4-1: U.S. Maritime Academies

Institution	Location	Program Established	Enrollment, Unlimited Licensing Programs	Annual Output (Average)
California Maritime Academy	Vallejo, CA	1929	547	137
Great Lakes Maritime Academy	Traverse City, MI	1969	207	52
Maine Maritime Academy	Castine, ME	1941	539	135
Massachusetts Maritime Academy	Buzzards Bay, MA	1891	629	158
SUNY Maritime College (New York)	Bronx, NY	1874	1,059	265
Texas A&M Maritime Academy	Galveston, TX	1962	410	103
U.S. Merchant Marine Academy	Kings Point, NY	1943	990	248
Total, Maritime Academies			4,381	1,098

(Source: Maritime Administration)

Each maritime academy embeds its mariner-credentialing program within a four-year baccalaureate-level college program. These programs must also meet other Federal and State requirements. The USCG approves the mariner-credentialing portion of the program, while a State or a recognized accreditation agency reviews the balance of the program. These accrediting agencies take into account the unique and often highly prescriptive requirements imposed by the USCG-approved credentialing program and

[11] 49 U.S.C. § 109 (a).
[12] For example, see 46 U.S.C. § 50101 and 46 U.S.C. § 51101.

balance those requirements with the general educational requirements expected for a baccalaureate degree. There are also requirements imposed by the Department of Education on institutions participating in Federal student aid programs.[13]

Maritime academy graduates receive an operational-level, unlimited USCG Merchant Mariner Credential and the STCW endorsements appropriate to their course of study (i.e., deck or engine). These credentials allow an individual to serve aboard vessels in international and domestic service as third mates or third assistant engineers. Some maritime academies may offer other degree programs that result in a limited credential. Some academies also offer non-matriculating professional or continuing education programs for initial issuance, renewal, or advancement of a credential.

4.2. Colleges and Universities

Research identified nearly 40 institutions of higher education that offer USCG-approved courses (see Table 4-2). These institutions offer a wide variety of mariner education and training programs. Some programs lead directly to a USCG credential, while others provide training in specific areas that augment an existing credential, such as qualification for an STCW endorsement.

Table 4-2: U.S. Colleges or Universities Offering USCG-Approved Courses

Institution	State
California Maritime Academy, Extended Learning*	CA
Cape Fear Community College	NC
Carteret Community College	NC
Clatsop Community College	OR
Community College of Baltimore County	MD
Del Mar College	TX
Delgado Community College	LA
Eckerd College	FL
El Camino Community College	CA
Great Lakes Maritime Academy, Continuing Education*	MI
Gulf Coast State College	FL
Kingsborough Community College	NY
Lamar State College Orange	TX
Louisiana State University, Fire and Emergency Training Institute	LA
Maine Maritime Academy, Continuing Education*	ME
Maine Maritime Academy, Limited Program*	ME
Massachusetts Maritime Academy, Center for Maritime Training*	MA
Mountwest Maritime Academy	WV
Northeast Maritime Institute (accredited by State of Massachusetts)	MA
Orange Coast College	CA
Oregon State University, College of Public Health and Human Sciences	OR
Owens Community College	OH
San Jacinto College, Maritime Technology & Training Center	TX

[13] Hegji, Alexandra, The Higher Education Act (HEA): A Primer (R43351, updated). Congressional Research Service: Washington, DC, October 24, 2018, available at https://crsreports.congress.gov/product/pdf/R/R43351.

Institution	State
Seattle Central College, Seattle Maritime Academy	WA
South Louisiana Community College, Marine & Petroleum Safety Training Center	LA
SUNY Maritime College, Department of Professional Education & Training*	NY
Texas A & M Engineering Extension Service, Emergency Services Training Institute	TX
Texas Maritime Academy, Center for Marine Training and Safety*	TX
Texas Southern University, College of Science, Engineering & Technology	TX
Tidewater Community College	VA
University of Alaska Anchorage	AK
University of Alaska Southeast, Ketchikan	AK
University of Findlay, All Hazards Training Center	OH
University of Louisiana at Lafayette Marine Survival Training Center	LA
University of Southern California, USC Nautical Science Program	CA
West Kentucky Community and Technical College, Inland Logistics & Marine Institute	KY

* These institutions are primarily considered maritime academies (see Section 4.1) but offer other USCG-approved courses as part of non-matriculating professional development or continuing education programs. (Source: U.S. Coast Guard National Maritime Center, May 2021)

Many of these programs are geared towards specific regional needs or industries (such as fisheries or river towing). Other programs focus on license renewals and upgrades from operational to management levels (e.g., second mate to chief mate). All of these institutions participate in Department of Education student aid programs, subject to individual student eligibility.

4.3. Maritime Labor Union Training Schools

Five maritime labor unions operate their own mariner training schools and offer a wide variety of USCG-approved courses for ratings and officers (see Table 4-3).[14] Eligibility to participate in these programs varies: three schools allow participation by union members, apprentices, and non-members, and two schools limit attendance to union members and apprentices only.

Table 4-3: Maritime Labor Union Training Schools

Institution	Affiliated Maritime Union	Location	Program Established	Eligibility
Calhoon MEBA Engineering School	Marine Engineers' Beneficial Association (MEBA)	Easton, MD	1968	Open
Inlandboatmen's Union Joint Apprenticeship Committee of Southern California	Inlandboatmen's Union (IBU) of the International Longshore and Warehouse Union (ILWU)	San Pedro, CA	2018	Limited
Seafarers Harry Lundeberg School of Seamanship	Seafarers International Union (SIU)	Piney Point, MD	1967	Limited
STAR Center	American Maritime Officers (AMO)	Dania Beach, FL	1969	Open

[14] The Andrew Furuseth School of Seamanship, operated by the Sailors' Union of the Pacific, does not offer its own USCG-approved training courses, but uses a maritime training center (https://sailors.org/andrew-furuseth-school-seamanship). The Marine Firemen's Union also uses a maritime training center (https://mfoww.org/training).

Institution	Affiliated Maritime Union	Location	Program Established	Eligibility
Maritime Institute of Technology & Graduate Studies (MITAGS)*	International Organization of Masters, Mates, and Pilots (MM&P)	Maryland and Washington locations	1972	Open

* MITAGS's USCG-approved courses include those originally offered by Fremont Maritime and the Pacific Maritime Institute.
(Source: U.S. Coast Guard National Maritime Center, May 2021)

Similar to the college and university programs, the programs and courses offered by maritime union training schools cover a wide range of credentials and STCW endorsements, as well as specific requirements of individual vessel operators (e.g., specific training required for service aboard Military Sealift Command vessels). Some schools offer programs specifically geared towards individuals seeking to advance from ratings to officers (i.e., the hawsepipe route), while others provide courses for both officers and ratings.

4.4. Company or Internal Training Programs

Over 30 private companies offer USCG-approved courses as part of their in-house training programs. Participation in these programs is generally limited to company employees. The courses offered are specific to the needs or expertise of the sponsoring company. Several of these in-house training school programs are quite extensive, such as the Edison Chouest Offshore (ECO) Training Center in Cut Off, Louisiana, which offers over 50 USCG-approved courses.

4.5. Proprietary Schools and Maritime Training Centers

Proprietary (private or commercial) schools and maritime training centers (MTCs) represent the largest sector of mariner training entities, with over 180 institutions located across the country. These institutions vary in the type and scope of USCG-approved courses they provide, from schools that offer specialized studies (e.g., sailing endorsements, towing, firefighting, radar certification, or first aid/CPR) to MTCs that offer more general and comprehensive catalogs of more than 75 courses.

Many of these schools are limited to low-level credentialing programs, such as the Operator of Uninspected Passenger Vessels (OUPV).[15] Other schools offer higher-level courses that support license renewals and upgrades for inland, coastal, and international (oceans) credentials. However, taken together, only the larger MTCs offer a sufficiently broad catalog of courses for officers or ratings in domestic and international service.

4.6. Federal- or State-Operated Training Entities

Nineteen (19) Federal- or State-operated entities offer USCG-approved training courses. The U.S. Army, U.S. Navy, U.S. Coast Guard, and National Oceanic and Atmospheric Administration manage 14 of these programs, with participation limited to their respective service personnel. For example, the U.S. Army Transportation School trains and certifies their own service members for service as aboard Army

[15] The OUPV credential is commonly referred to as a "Six Pack license," since it limits service to vessels of less than 100 gross registered tons (approximately 65 feet in length) carrying six or fewer passengers for hire.

watercraft. The USCG has reviewed the Army's training program and determined that certain elements of that training may be applied towards qualification for a separate USCG credential.

Two State agencies that operate ferry systems (the Alaska Marine Highway System and Washington State Ferries) have training programs for their employees. Two other State agencies (the Alaska State Fire Marshal and Washington State Patrol) offer firefighting and safety courses that are available to civilian mariners. One State institution, the Alaska Vocational Technical Center (AVTEC), is operated by the State of Alaska as a Division of the Department of Labor and Workforce Development. AVTEC is accredited through the Council on Occupational Education, a national accrediting agency of higher education institutions recognized by the U.S. Department of Education. Students attending AVTEC are eligible to participate in Federal student aid programs.

4.7. Non-Profit Organizations

There are 26 non-profit organizations that offer USCG-approved courses. Most of these organizations offer a very limited range of courses in specialized subjects (e.g., advanced first aid, cargo stowage, firefighting, radar certification, or first aid/CPR). Only five organizations offer 10 or more courses. Taken together, these institutions generally do not represent a significant original source of mariners.

(Credit: SUNY Maritime College)

5. Sources of Federal Financial Assistance

This section describes the specific Federal financial aid programs identified through this study that could be available to individuals seeking mariner education or training. Beyond the core programs of the Department of Education, Department of Labor, or Department of Veterans Affairs, researchers looked broadly across the Federal Government to identify any other sources; only a handful were found. This inventory does not include programs that are, by their nature, limited to other professions, such as the Teacher Education Assistance for College and Higher Education (TEACH) Grant program, scholarships or loans for medical careers, or programs for other courses of study unrelated to the maritime field.[16]

5.1. Department of Education

The Department of Education (ED) is the Federal agency with the most extensive overall program providing financial assistance for education and training. The Department of Education's loan and grant programs were established as part of the Higher Education Act of 1965 (Pub. L. 89–329), which originally included both educational opportunity grants (79 Stat. 1232) and low-interest loans insured by the Federal Government (79 Stat. 1236). Over the ensuing decades, these programs have expanded significantly; today, the Department of Education provides over $120 billion in annual financial assistance, with an outstanding Federal loan portfolio valued at over $1.56 trillion.[17]

To receive any Federal student aid, an individual, parent, or guardian must complete the Free Application for Federal Student Aid (FAFSA). The FAFSA collects various demographic and financial information and uses a set of publicly available criteria to determine a potential student's grant or loan eligibility, and the respective funding levels for any grants or loans.[18] FAFSA information is submitted to the financial aid office of each institution selected by the applicant. Each institution then determines the amount of each grant or loan; the amount may not exceed the financial need established through the FAFSA formulas. Since the aid determination process must also account for potential State grants or loans, the FAFSA submission schedule varies by State.[19]

The focus of ED student financial aid was initially on higher education, degree-granting programs. However, several program changes have expanded eligibility to include individuals participating in vocational training programs. Today, ED student financial aid programs are in place at over 6,000 colleges and career schools.

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[16] For example, the TEACH Grant provides payments of up to $4,000 a year to students who are completing or plan to complete course work needed to begin a career in teaching. The TEACH Grant is different from other Federal student grants because it requires an individual to agree to subsequently complete four years of qualifying service as a teacher as a condition for receiving the grant. Should an individual not meet the requirements of the service obligation, all TEACH Grants received are converted to Direct Unsubsidized Loans that must be repaid in full, with interest charged from the date of each TEACH Grant payment. (See "TEACH Grants," Department of Education, web, available at https://studentaid.gov/understand-aid/types/grants/teach.)

[17] "Student Loan Debt Statistics," EducationData.org, web, available at https://educationdata.org/student-loan-debt-statistics.

[18] Federal Student Aid, "2021-2022 Expected Family Contribution (EFC) Formula Guide," web, https://fsapartners.ed.gov/knowledge-center/library/handbooks-manuals-or-guides/2020-08-11/2021-2022-expected-family-contribution-efc-formula-guide.

[19] Federal Student Aid, "FAFSA Deadlines," web, https://studentaid.gov/apply-for-aid/fafsa/fafsa-deadlines.

5.1.1. Department of Education Grants

The Department of Education administers three grant programs that are available to merchant mariners: Pell Grants, Federal Supplemental Educational Opportunity Grants, and Iraq and Afghanistan Service Grants.

5.1.1.1. Pell Grants

The Pell Grant program is perhaps the best-known grant program administered by the Federal Government. Pell Grants can cover tuition, fees, housing and food expenses, books and supplies, transportation, and even childcare for students enrolled in eligible post-secondary programs that lead to a certificate or degree. Pell Grants can also cover up to a year of remedial coursework if the student is admitted to an eligible program and the remedial coursework is part of or required for that program. (See https://studentaid.gov/understand-aid/types/grants/pell.)

The maximum Federal Pell Grant award is $6,495 for the 2021–2022 award year (July 1, 2021 to June 30, 2022). In FY 2021, Congress appropriated a total of $29.5 billion towards the Federal Pell Grants program.

5.1.1.2. Federal Supplemental Educational Opportunity Grant

A Federal Supplemental Educational Opportunity Grant (FSEOG) is available for undergraduate students with exceptional financial needs. Not all institutions participate in the FSEOG program; those who participate in the program receive funds from ED and then administer the funds directly. Unlike the Pell Grants, which are available to every eligible student, once the school awards the full amount of its FSEOG funds, it will not be able to issue additional FSEOG awards that year. (See https://studentaid.gov/understand-aid/types/grants/fseog.)

The program offers grants from $100 to $4,000 per year, based on need. In FY 2021, Congress appropriated a total of $880.0 million towards the FSEOG program.

5.1.1.3. Iraq and Afghanistan Service Grants

The Iraq and Afghanistan Service Grants program was established in 2009 as an amendment to the Higher Education Act of 1965 (Pub. L. 111–39, 123 Stat. 1939). Grants under this program are made to students who do not qualify for Federal Pell Grants based on their expected family contribution, but meet all other Federal Pell Grant eligibility requirements. This includes those whose parent or guardian died as a result of military service in Iraq or Afghanistan. (See https://studentaid.gov/understand-aid/types/grants/iraq-afghanistan-service.)

The grant award is equal to the amount of a maximum Federal Pell Grant for the award year but cannot exceed the cost of attendance for that award year. For the 2021–22 award year (July 1, 2021 to June 30, 2022), the maximum Federal Pell Grant award is $6,495. In FY 2021, Congress appropriated a total of $463,000 towards this program.

5.1.2. William D. Ford Federal Direct Student Loan Program

Under the William D. Ford Federal Direct Loan (Direct Loan) Program, eligible students and parents borrow directly from the U.S. Department of Education at participating schools. There are four types of

Direct Loans: Direct Subsidized Loans, Direct Unsubsidized Loans, Direct PLUS Loans, and Direct Consolidation Loans. (See https://studentaid.gov/understand-aid/types/loans.)

5.1.2.1. Direct Subsidized Loans

Direct Subsidized Loans are loans made to eligible undergraduate students who demonstrate financial need to help cover higher education costs at a college or career school. (Graduate and professional students are not eligible to receive Direct Subsidized Loans.) The Department of Education pays the interest on these loans while an individual is enrolled at least half-time at an eligible institution, during a six-month grace period that begins after a student ceases to be enrolled at least half-time, and during approved deferment periods.

Direct Subsidized Loans and Direct Unsubsidized Loans (see the next section) have annual limits (the maximum amount that a student may receive for an academic year) that vary based on grade level and (for Direct Unsubsidized Loans) dependency status. The actual Direct Subsidized Loan amount that a student is eligible to receive also takes into account other financial assistance awarded to the student. There are also aggregate loan limits for Direct Subsidized Loans and Direct Unsubsidized Loans.

See Section 5.1.2.2 on Direct Unsubsidized Loans for the maximum annual and aggregate combined loan limits for both Direct Subsidized Loans and Direct Unsubsidized Loans.

5.1.2.2. Direct Unsubsidized Loans

Direct Unsubsidized Loans are loans made to eligible undergraduate, graduate, and professional students. Eligibility is not based on financial need. The borrower is responsible for paying the interest on a Direct Unsubsidized Loan during all periods. As with Direct Subsidized Loans, the actual Direct Unsubsidized Loan amount that a student is eligible to receive takes into account the student's other financial aid.

5.1.2.3. Limits for Direct Subsidized and Unsubsidized Loans

For dependent undergraduate students, the maximum combined Direct Subsidized Loan/Direct Unsubsidized Loan annual loan limit is $7,500. Not more than $5,500 of this amount may be in Direct Subsidized Loans. The combined Direct Subsidized Loan/Direct Unsubsidized Loan aggregate limit is $31,000, not more than $23,000 of which can be subsidized.

For independent undergraduate students, the maximum combined Direct Subsidized Loan/Direct Unsubsidized Loan annual loan limit is $12,500. Not more than $5,500 of this amount may be in Direct Subsidized Loans. The combined Direct Subsidized Loan/Direct Unsubsidized Loan aggregate limit is $57,500, not more than $23,000 of which can be subsidized.

For a graduate or professional student, the Direct Unsubsidized Loan annual loan limit is $20,500. The combined Direct Subsidized Loan/Direct Unsubsidized Loan aggregate limit is $138,500, not more than $65,000 of which can be subsidized. For graduate and professional students, the aggregate loan limit includes subsidized and unsubsidized loans received for undergraduate study, and subsidized loans received for graduate or professional study prior to July 1, 2012 (when graduate and professional students were eligible to receive subsidized loans).

5.1.2.4. Direct PLUS Loans

Direct PLUS Loans are Federal loans available to parents of dependent undergraduate students to help pay for college or career school.[20] Direct PLUS Loans are also available to eligible graduate or professional students through schools participating in the Direct Loan Program. Eligibility is not based on financial need, but a credit check is required. Borrowers who have an adverse credit history must meet additional requirements to qualify. The maximum loan amount is the cost of attendance (as determined by the school) less any other financial aid the student may receive.

5.1.3. Carl D. Perkins Career and Technical Education Act Programs

The Carl D. Perkins Career and Technical Education Act of 2006 (as amended) provides Federal funding to States and discretionary grant recipients to improve secondary and postsecondary career and technical education programs.[21] The purpose of the Act is to develop the academic, career, and technical skills of secondary and postsecondary students who elect to enroll in career and technical education programs. In FY 2021, Congress appropriated a total of $2.03 billion to support the Perkins Act, of which $1.31 billion was allocated to States by formula grants.[22] (See https://cte.ed.gov/.)

5.1.4. Other Department of Education Programs with Limited Applicability

Some maritime schools may participate in the Federal Work-Study Program, which provides part-time employment to individuals with financial needs. The program is open to full- and part-time students, who are paid directly for hours worked. Wages earned through the Federal Work-Study Program are typically not credited directly towards tuition, room, or board, but are intended to provide general financial relief for students in need. Students would contact their institution's financial aid office to determine whether a Federal Work-Study Program is in place.

5.1.5. Department of Education Programs No Longer Available

Two well-known ED loan programs are still active but no longer issuing new loans. (These programs are included here since many loans made under these programs are still in repayment.)

- The Perkins Loan was a need-based student loan program that provided a fixed interest rate of 5 percent over a 10-year repayment period. The Perkins Loan program expired in 2017.
- The Federal Family Education Loan (FFEL) Program used private lenders to make Federal student loans to students. Guaranty agencies insured these funds, which were further reinsured by the Federal Government. New loans under the FFEL Program ended as of July 1, 2010, under the Health Care and Education Reconciliation Act of 2010.

[20] Direct PLUS Loans are authorized under 20 U.S. Code § 1078–2.

[21] See Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Pub. L. 109–270), available at https://www.congress.gov/109/plaws/publ270/PLAW-109publ270.pdf and Strengthening Career and Technical Education for the 21st Century Act (Pub. L. 115-224), available at https://www.govinfo.gov/content/pkg/PLAW-115publ224/pdf/PLAW-115publ224.pdf.

[22] See Consolidated Appropriations Act, 2021 (Pub. L. 116–260), and "State Allocations," Perkins Collaborative Resource Network, U.S. Department of Education, web, available at https://cte.ed.gov/grants/state-allocations.

5.2. Department of Labor

The Department of Labor (DOL) provides a wide variety of career services for individuals and provides a range of financial assistance programs. The DOL Employment and Training Administration (ETA) manages the majority of these programs. However, unlike the ED programs, DOL-funded programs are administered directly by individual States, with funds allocated by State in accordance with DOL statutory formulas.[23]

5.2.1. Workforce Innovation and Opportunity Act (WIOA) Adult Program

The Workforce Innovation and Opportunity Act (WIOA) is one of the primary statutory instruments governing DOL programs.[24] Several WIOA component programs are administered at the State level, including employment and training services (for veterans, adults, dislocated workers, and young people) and employment service programs (provided through 2,400 American Job Centers). DOL funds these programs through formula grants to the States. In FY 2021, Congress appropriated $3.6 billion towards WIOA programs.[25]

When disbursing WIOA Adult funds to provide career or training services, States are required to prioritize eligible workforce candidates and individuals building foundational technical skills in accordance with statutory WIOA guidelines. Veterans also receive priority of service in all DOL-funded employment programs. Under WIOA, these priorities must be implemented regardless of the level of funding available to provide services in the local area.

5.2.2. WIOA Dislocated Worker Program

The Dislocated Worker Program helps workers get back to work as quickly as possible and overcome barriers to employment. Individuals become dislocated workers due to job loss, layoffs, global trade dynamics, or transitions in economic sectors. The Dislocated Worker Program provides services to assist them in re-entering the workforce. Dislocated worker services are provided through American Job Center (AJC) network. The AJCs provide significant resources to States to implement workforce education, training, and employment programs. However, it is up to the individual State to determine how to prioritize those resources.

5.2.3. Trade Adjustment Assistance Program

The DOL Trade Adjustment Assistance (TAA) Program offers a variety of benefits and services to support workers in their search for reemployment. This includes Trade Readjustment Allowances, training, assistance with healthcare premium costs, Reemployment Trade Adjustment Assistance, employment and case management services, and may include job search and relocation allowances. The TAA Program is geared to support the entire workforce of companies impacted negatively by changes in

[23] Department of Education, "State Statutory Formula Funding," web, available at https://www.dol.gov/agencies/eta/budget/formula/state.
[24] Workforce Innovation and Opportunity Act (Pub. L. 113–128), available at https://www.govinfo.gov/content/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf.
[25] Consolidated Appropriations Act, 2021 (Pub. L. 116–260).

business operations (e.g., if a company transfers its entire manufacturing operation or a call center from the U.S. to a foreign nation).

The Trade Adjustment Assistance Reauthorization Act of 2015 authorized Trade Readjustment Allowances (TRA), which provide income support to individuals participating in full-time training.[26] TRA payments are made weekly, and based on an individual's weekly unemployment insurance (UI) benefit amount received; individuals must have been entitled to receive UI benefits and must have exhausted their UI entitlements before they are eligible to receive TRA.

Individual States administer the TRA programs, and there are significant eligibility requirements (e.g., age, residency, and types of program costs). The impacted individual must apply to the program; for example, see the Connecticut Department of Labor website for Reemployment Trade Adjustment Assistance, https://www.ctdol.state.ct.us/TradeAct/benefits/reemployment.htm. (Additional information is available at https://www.dol.gov/agencies/eta/tradeact/benefits/2015-amendments.)

5.2.4. Job Corps

Job Corps is a residential career-training program established by DOL in 1964.[27] The program helps eligible young people ages 16 through 24 complete their high school education, trains them for meaningful careers, and assists them with obtaining employment. The program is free for eligible participants, who receive room and board, training, basic health care, and a modest living allowance. Congress appropriated $1.75 billion towards the Job Corps program in FY 2021.[28]

Many Job Corps programs take place in a residential setting at one of the 121 Job Corps Centers across the U.S.; some States have multiple Centers, while others have just one. There are currently 78 different career programs listed on the Job Corps website (https://www.jobcorps.gov/), but individual Centers may not offer all programs. A review of the Job Corps website identified two mariner programs:

- Inland River Systems Deckhand. This 18-month program trains individuals to serve as deckhands on an inland barge. It is unclear whether it leads to a USCG certification. This program is available at only one site (the Earle C. Clements Job Corps Center in Morganfield, KY; see https://earlecclements.jobcorps.gov/careers/205).
- Seamanship. This 18-month program is offered through the Inland Boatmen's Union and leads to certification as an Able Seaman. It is available at only one site (the Tongue Point Job Corps Center in Astoria, OR; see https://tonguepoint.jobcorps.gov/careers/209).

5.2.5. Department of Labor Career Resources

There are several career planning resources and tools available through DOL for both individuals and employers. The programs do not provide direct financial assistance for career training or credentialing, but do provide guidance and insight for career seekers, and identify where individuals can look for further information, including sources of financial assistance.

[26] Trade Adjustment Assistance Reauthorization Act of 2015, Title IV of the Trade Preferences Extension Act of 2015 (Pub. L. 114–27, 129 Stat. 373), available at https://www.congress.gov/114/plaws/publ27/PLAW-114publ27.pdf.
[27] Economic Opportunity Act of 1964 (Pub. L. 88–452, 78 Stat. 508).
[28] Consolidated Appropriations Act, 2021 (Pub. L. 116–260).

AMERICAN JOB CENTERS. The DOL Employment and Training Administration maintains nearly 2,400 American Job Centers (AJCs) throughout the U.S.[29] These centers offer training referrals, career counseling, job listings, and similar employment-related services. The AJCs also work closely with State and local Workforce Development Boards (WDBs). WDBs are partner organizations that connect local businesses and governments with DOL and the AJCs. More than 50 percent of each WDB's members must come from the business community. WDBs also have representation from local community colleges and other training providers, as well as elected officials and workforce program leaders. This ensures that current skill needs of local businesses are communicated to relevant training programs. AJCs are accessed through the Career One Stop website (see below).

CAREER ONE STOP. The Career One Stop website (https://www.careeronestop.org/) offers individuals comprehensive guidance on career planning, education, and training. The website is sponsored by DOL in partnership with its national network of AJCs. The Career One Stop website provides general information on financial assistance, including cross-references to other Federal or federally funded programs, such as the VA, ED, and certain State programs. The site also features a "Scholarship Finder" (https://www.careeronestop.org/Toolkit/Training/find-scholarships.aspx); a search of that list using the phrase "merchant marine" identified four private scholarships available to dependents of U.S. merchant mariners.

Running some typical searches (e.g., searching keyword "captain" in "Texas") using the site's "Find Training" function (https://www.careeronestop.org/FindTraining/find-training.aspx) did yield results. Many of the programs returned through the database search were two- or four-year college-level programs and can be filtered (e.g., by occupation, program name, or program length). However, the search results appear limited to a hyperlink to each institution's website; users must then search that individual website to find further details and information.

MY NEXT MOVE. My Next Move (https://www.mynextmove.org/) is a career-planning website sponsored by DOL.[30] Material is similar to the Career One Stop website, presented in a simpler infographic style. There is also significant cross-referencing to the Career One Stop website. Running some typical searches (e.g., searching keywords "captain" or "ships" or "maritime") using the site returned information on three maritime careers:

- Sailors and Marine Oilers (O*NET Code 53-5011.00), corresponding to deck and engine department ratings (https://www.mynextmove.org/profile/summary/53-5011.00)
- Captains, Mates, and Pilots of Water Vessels (O*NET Code 53-5021.00), corresponding to deck department officers (https://www.mynextmove.org/profile/summary/53-5021.00)

[29] American Job Centers were established under the Workforce Investment Act of 1998 (Pub. L. 105–220), and reauthorized in the Workforce Innovation and Opportunities Act of 2014 (Pub. L. 113–128, 128 Stat. 1425), available at https://www.govinfo.gov/content/pkg/PLAW-113publ128/pdf/PLAW-113publ128.pdf.

[30] My Next Move is an effort of the Occupational Information Network (O*NET), which was developed by the North Carolina Department of Commerce using a grant from the U.S. Department of Labor/Employment and Training Administration; for more information, see https://www.onetcenter.org/.

- Ship Engineers (O*NET Code 53-5031.00), corresponding to engine department officers, (https://www.mynextmove.org/profile/summary/53-5031.00)

The information returned for these searches included general skills and knowledge required for the positions, education and training requirements, and salary. Links were provided to find training specific to each position.

5.2.6. Recognized Apprenticeship Programs

Federal workforce development funds, appropriated through provisions of WIOA Title I, may be used to support apprenticeship programs.[31] State and local agencies (such as AJCs) responsible for administering these funds have some discretion in establishing the level of financial assistance for apprenticeship programs, such as:

- Assistance with training and tuition costs;
- Support for training expenses;
- Coverage for supervision and extraordinary training costs; or
- Provision of additional recruiting, placement, and support services.

The DOL maintains a separate apprenticeship program website (https://www.apprenticeship.gov/) for both individuals and employers. Running a typical website search (e.g., searching keywords "captain" or "ships" or "maritime") using the Apprenticeship Job Finder function did not yield any results (see https://www.apprenticeship.gov/apprenticeship-job-finder).

However, using the Employers Occupation Finder search function for "Transportation and Warehousing" jobs (https://www.apprenticeship.gov/apprenticeship-occupations/industry-listings?industryCode=48) yielded a broad list that included the same three career classifications identified in the My Next Move search (see Section 5.2.5, above). The detailed descriptions from this search contained information about the specific job (e.g., responsibilities, training, skills) but did not indicate whether any apprenticeship programs actually existed.

5.2.7. Program Partnerships with Department of Veterans Affairs

The DOL Veterans' Employment and Training Service (VETS) works closely with the Department of Veterans Affairs (VA) and State employment, veterans, and workforce agencies to provide career transitioning, employment, and training services to eligible veterans. As required by law, veterans receive priority of service in all DOL training programs.[32]

EMPLOYMENT NAVIGATOR. The Employment Navigator (EN) and Partnership Pilot (ENPP) provides dedicated one-on-one career assistance to transitioning service members. These services are provided outside of the formal DOL Transition Assistance Program (TAP) classroom instruction. EN services are currently available at 13 military installations worldwide. (See https://www.dol.gov/agencies/vets/programs/tap/employment-navigator-partnership.)

[31] See also, U.S. Department of Labor, Employment and Training Administration, *The Federal Resources Playbook for Registered Apprenticeship*, no date, https://www.apprenticeship.gov/sites/default/files/playbook.pdf.
[32] 38 U.S.C. § 4215, Priority of service for veterans in Department of Labor job training programs.

JOBS FOR VETERANS STATE GRANTS. The Jobs for Veterans State Grants (JVSG) program provides Federal funding, through a formula grant, to 54 State workforce agencies to hire dedicated staff who provide individualized career and training-related services to eligible veterans (including disabled veterans) and to assist employers in filling their workforce needs with job-seeking veterans. (See https://www.dol.gov/agencies/vets/programs/grants/state/jvsg.)

5.3. Department of Transportation

The Department of Transportation's responsibility for merchant mariner training is delegated to the Maritime Administration (MARAD), whose statutory mission is to "foster, promote, and develop the merchant maritime industry of the United States."[33] MARAD programs seek to ensure a consistent supply of capable and well-trained merchant mariners to crew the U.S.-flag merchant marine ships, which, in turn, maintains U.S. national and economic security.[34] MARAD efforts to achieve this objective include operation of one Federal institution (the U.S. Merchant Marine Academy), support of six State Maritime Academies (SMAs), launch of the Centers of Excellence for Domestic Maritime Workforce Training and Education Program, and stewardship of other mariner training and education programs.[35]

5.3.1. U.S. Merchant Marine Academy

The U.S. Merchant Marine Academy (USMMA), located in Kings Point, NY, is MARAD's flagship maritime academy. The USMMA curriculum is especially challenging, condensing a four-year degree program into only three years of academic study, with one year of sea duty gaining shipboard operational experience aboard commercial ships and U.S. Government vessels. (See https://www.usmma.edu/.)

The program admits approximately 280 students each year, with approximately 230 completing the program. Upon graduation, individuals receive a Bachelor of Science degree, an unlimited USCG merchant mariner's credential (including STCW endorsements) as a deck or engineering officer, and a reserve officer's commission in the Armed Forces. Students matriculate from across the U.S. with varying technical skills, academic preparation, and prior maritime experience. Enlisted members of the U.S. Armed Forces, whether on active duty or in a reserve component, are eligible for admission.

Individuals graduating from USMMA incur a service obligation that requires, among other conditions, that they serve in an approved maritime position for five (5) years following graduation. They must also maintain a valid merchant marine officer's credential (license) for at least six (6) years; a license is only valid for five (5) years, and a USMMA graduate must renew or upgrade their license at least once. The individual must also maintain the appropriate national and international endorsements and certifications required (e.g., STCW endorsements) for service aboard vessels on domestic and international voyages. Finally, USMMA graduates must maintain their military reserve commission for eight (8) years. Failure to comply with the service obligation may result in a penalty, such as repayment of the cost of education.

Each year, MARAD calculates the cost of education for each graduating class. This represents those discrete costs associated with attending USMMA that generally equate to tuition, room, board, books,

[33] 49 U.S.C. § 109 (a).
[34] For example, see 46 U.S.C. § 50101 and 46 U.S.C. § 51101.
[35] Maritime Administration, Education, web, available at https://maritime.dot.gov/education.

and other allowances. The current cost of education provided for a USMMA graduate in 2020 is $289,149 for an approximate annual total program cost of $76.6 million.

5.3.2. State Maritime Academy Financial Support

As detailed in 46 CFR § 310.2, MARAD provides two types of annual financial support to the State Maritime Academies. These includes a direct payment (for general use in facility maintenance and program support) and a payment for the cost of fuel consumed by the MARAD-provided training ship. In FY 2021, MARAD provided $9.8 million in annual financial assistance (see Table 5-1) to the six State Maritime Academies, which helped reduce overall programmatic costs of each institution.

Table 5-1: FY 2021 MARAD Appropriations for State Maritime Academies

Appropriations Category	Amount
Fuel Assistance	3,800,000
Direct Payments	6,000,000
Total	**$ 9,800,000**

(Source: Maritime Administration)

5.3.3. Investment in U.S. Government-Owned Training Ship Fleet

In addition to direct financial support, MARAD is authorized to make available U.S. Government-owned vessels for the training of merchant mariners.[36] MARAD currently provides eight vessels over 150 feet in length under this authority (see Table 5-2) and budgets $30,500,000 towards maintenance and repair for these vessels.

Table 5-2: Current MARAD Training Ships

Institution	Assigned Training Ship	Year Built	Entered Service as Training Ship	Capacity (All Persons)
California Maritime Academy	TS *Golden Bear**	1989	1996	380
Great Lakes Maritime Academy	TS *State of Michigan*	1985	2002	65
Maine Maritime Academy	TS *State of Maine**	1990	1997	298
Massachusetts Maritime Academy	TS *Kennedy**	1967	2003	710
Paul Hall Center (SIU School)	MV *Freedom Star*	1981	2015	50
SUNY Maritime Academy	TS *Empire State**	1962	1989	788
Texas A&M Maritime Academy	TS *General Rudder**	1985	1992	65
U.S. Merchant Marine Academy	TV *Kings Pointer*	1980	2012	50

* Vessel slated to be replaced within the next five years. (Source: Maritime Administration)

Over the coming five years, MARAD plans to place five new training ships in service, replacing five of the current (legacy) training ships. Known as National Security Multi-mission Vessels (NSMVs), these new ships will provide a state-of-the-art training platform that ensures the U.S. continues to set the world standard in maritime training. The ships—which the Secretary of Transportation designated as the *State*-class—are designed with dedicated training spaces such as classrooms, a separate training bridge, lab spaces, and an auditorium. The NSMV has space to embark up to 600 cadets, maximizing the capability

[36] 46 U.S.C. § 51504.

of the ship and its mission to provide students with an excellent education. As of FY 2022, Congress has appropriated $1.61 billion towards this effort.

5.3.4. Student Incentive Payment (SIP) Program

The Maritime Education and Training Act of 1980 established the Student Incentive Payments (SIP) Program, a federally funded initiative to provide financial support to individuals enrolled in certain licensing programs at the state maritime academies.[37] Participation in the SIP Program is entirely voluntary; but, it is limited to those individuals who have applied for, been offered, and been accepted into the Navy Strategic Sealift Officer (SSO) Midshipman Program or (see Section 5.4.1) or the USCG Reserve (and simultaneously have applied and been accepted for enlisted reserve status).

An individual enrolled in the SIP Program incurs a service obligation that requires, among other conditions, that the individual serve in an approved maritime position for three (3) years following graduation. They must also maintain a valid merchant marine officer's credential (license) for at least six (6) years; a license is only valid for five (5) years, and a SIP Program participant must renew or upgrade their license at least once. The individual must also maintain the appropriate national and international endorsements and certifications required (e.g., STCW endorsements) for service aboard vessels on domestic and international voyages. Failure to comply with the service obligations may result in a penalty, such as repayment of the SIP awards.

MARAD administers the SIP funds, with the application process routed through each SMA. The number of participants in the SIP Program is limited by the amount of funding appropriated each year; however, once funds are available for distribution, MARAD obligates them to each SIP recipient up to the maximum limit and according to their enrollment approval date and graduation year. This ensures that individuals accepted into the program will continue to receive SIP payments throughout their participation, regardless of subsequent changes in Federal appropriations levels. In FY 2021, MARAD received $2,400,000 in congressional appropriations for the SIP Program, which represented funding for 75 new enrollees at the current rate of $32,000 per student.

5.3.5. Centers of Excellence for Domestic Maritime Workforce Training and Education

The National Defense Authorization Act of 2018 provides the Secretary of Transportation with discretionary authority to designate eligible and qualified entities involved in the domestic maritime workforce training and education as Centers of Excellence for Domestic Maritime Workforce Training and Education (CoE).[38] Once MARAD designates an institution as a CoE, the Government and institution may enter into a cooperative agreement.[39] MARAD support to the CoE program may include:

- Donation of surplus equipment;
- Temporary use of MARAD vessels and assets for indoctrination, training, and assistance, subject to availability and approval by MARAD and the Department of Defense when applicable;
- Availability of MARAD subject matter experts to address students when feasible; and

[37] Maritime Education and Training Act of 1980 (Pub. L. 96–453, 94 Stat. 2004), available at https://www.govinfo.gov/content/pkg/statute-94/pdf/statute-94-pg1997.pdf.
[38] National Defense Authorization Act for Fiscal Year 2018 (Pub. L. 115–91, 131 Stat. 1914), § 3507, available at https://www.congress.gov/115/plaws/publ91/PLAW-115publ91.pdf.
[39] 31 U.S.C. § 6305 - Using cooperative agreements.

- Funding, to the extent such funds are appropriated and specifically made available for this purpose. (As of FY 2021, no funds have been appropriated for this purpose.)

MARAD solicited applications from institutions for designation as a CoE in late 2020.[40] After a thorough application review, MARAD announced 27 designee institutions on May 19, 2021 (see Table 5-3). A comparison of the CoEs against the USCG National Maritime Center's current list of approved training providers shows that 17 of the 35 institutions participating in the CoE program are currently offering USCG-approved mariner credentialing courses. Students attending 30 institutions affiliated with one of the CoEs are eligible to participate in ED Federal student aid programs. Maritime training centers (MTCs) designated as CoEs are not currently eligible to participate in ED Federal student aid programs.

Table 5-3: Centers of Excellence for Domestic Maritime Workforce Training and Education

Institution	Location	USCG Courses (as of May 2021)	Eligible for Fed. Student Aid
Alaska Maritime Education Consortium (AMEC), comprising five institutions:			
University of Alaska (Fairbanks)	Fairbanks, AK		X
Alaska Vocational Technical Center (AVTEC)	Seward, AK	X	X
University of Alaska Southeast Juneau	Juneau, AK		X
University of Alaska Anchorage	Anchorage, AK	X	X
University of Alaska Southeast Ketchikan	Ketchikan, AK	X	X
Anne Arundel Community College	Arnold, MD		X
Cape Fear Community College	Wilmington, NC	X	X
Carteret Community College	Morehead City, NC	X	X
Clatsop Community College	Astoria, OR	X	X
College of the Florida Keys	Key West, FL		X
Community College of Baltimore County	Baltimore, MD	X	X
Community College of Rhode Island	Warwick, RI		X
Delaware County Community College	Media, PA		X
Delgado Community College	New Orleans, LA	X	X
Divers Institute of Technology	Seattle, WA		X
Flagship Maritime LLC	Tacoma, WA	X	
Guam Shipyard	Tamuning, GU		
Hinds Community College	Raymond, MS		X
Kingsborough Community College	Brooklyn, NY	X	X
Long Beach Community College District	Long Beach, CA		X
Maritime Institute of Technology and Graduate Studies (MITAGS), east and west coast campuses	Linthicum Hts, MD Seattle, WA	X	
Mid-Atlantic Maritime Academy	Norfolk, VA	X	
Mira Costa Community College District	Oceanside CA		X
Mississippi Gulf Coast Community College	Perkinston, MS		X
Orange Coast College	Newport Bch, CA	X	X

[40] 85 FR 67599, available at https://www.govinfo.gov/content/pkg/FR-2020-10-23/pdf/2020-23490.pdf.

Institution	Location	USCG Courses (as of May 2021)	Eligible for Fed. Student Aid
Pacific Northwest Maritime Industries Education Alliance, comprising six institutions:			
Clark College	Vancouver, WA		X
North Seattle College	Seattle, WA		X
Portland Community College	Portland, OR		X
Seattle Central Community College	Seattle, WA		X
Skagit Valley College	Mt. Vernon, WA		X
South Seattle Community College	Seattle, WA		X
Northeast Wisconsin Technical College	Green Bay, WI		X
San Jacinto Community College District	Pasadena, TX	X	X
STAR Center	Dania Beach, FL	X	
Tidewater Community College	Virginia	X	X
West Kentucky Community and Technical College	Paducah, KY	X	X

(Sources: Maritime Administration, USCG National Maritime Center, Department of Education)

5.3.6. Military to Mariner

The Military to Mariner (M2M) program is a multi-agency effort, initiated by the Committee on the Marine Transportation System (CMTS) in 2014, to facilitate the accession of military veterans into the merchant mariner profession.[41] Many veterans have a wide range of maritime technical, logistical, and leadership experiences, and the M2M program aims to leverage that experience and expedite the credentialing process. DoD, USCG, MARAD, and the CMTS have websites that provide information on the program and the mariner credentialing procedure.

- DoD website: https://milgears.osd.mil/Mariner
- USCG website: https://www.dco.uscg.mil/nmc/military_sea_service/
- MARAD website: https://www.maritime.dot.gov/outreach/military-mariner
- CMTS website: https://www.cmts.gov/military/

The DoD and USCG websites provide detailed information on how prior military service—such as military training and shipboard experience—may be applied towards specific credentialing requirements. DoD maintains a separate website (Credentialing Opportunities On-Line) that includes a helpful crosswalk between different military credentials and their Federal or private sector counterparts. A search of the website (https://www.cool.osd.mil/research-related-credentials.htm) for equivalent USCG credentials returned a list of 89 different mariner credentials. While there may not be a direct correlation between a military certification and a mariner credential, the site identifies applicable military skills and experiences that can be applied towards a mariner credential.

The Department of Labor and the Department of Veterans Affairs also have extensive networks to support service members transitioning to civilian careers. These programs (described in Section 5.2.7) are significant assets to the Military to Mariner effort.

[41] "Military to Mariner (M2M) Initiative," U.S. Committee on the Marine Transportation System, web, available at https://www.cmts.gov/military/.

5.4. Department of Defense

The Department of Defense funds numerous education and training programs for its service members. Participation in these programs incurs a military service commitment, which could preclude the immediate pursuit of a maritime career.

5.4.1. Reserve Officer Training Corps (ROTC) Programs

Each DoD military service (Army, Marine Corps, Navy, Air Force, and Space Force) administers a college scholarship program as part of its officer accession strategy.[42] Known as the Reserve Officer Training Corps (ROTC), these programs are in place at over 1,700 colleges and universities in the U.S. In exchange for a paid college education and a guaranteed post-college career, participants in ROTC programs commit to serving in the respective service after graduation.

While it may be possible for an individual participating in a Marine Corps, Air Force, or Space Force ROTC program to design a career path that leads to a post-service career as a merchant mariner, it is unlikely that many individuals will choose that path. In contrast, the Army and the Navy have large service components that require skilled mariners. After completing their respective Army or Navy service, individuals from those components would make ideal candidates for civilian merchant mariner positions.

5.4.2. Strategic Sealift Officer Program (SSOP)

The Department of the Navy established a Merchant Marine Reserve (MMR) as an element of the U.S. Naval Reserve in 1913. In 2011, the Navy restructured the MMR program and renamed it the Strategic Sealift Officer Program (SSOP).[43] The program is sponsored by the Deputy Chief of Naval Operations for Fleet Readiness and Logistics (CNO N4), with oversight and coordination provided by the Military Sealift Command and the Naval Service Training Command.

Unlike the Navy ROTC program, which produces *Active Duty* officers in the Navy and Marine Corps and awards academic scholarships to qualified midshipmen, the SSOP produces *Reserve* officers in the Navy but does NOT provide scholarships. The primary source of SSOP personnel are graduates of USMMA and SMA graduates who participated in the Strategic Sealift Midshipman Program (SSMP). SMA students enrolled in the MARAD Student Incentive Payment program (see Section 5.3.3) must enroll in the SSMP.[44] [45] The SSOP also allows the direct appointment of officers who possess an active USCG unlimited officer credential at the minimum level of a second mate or second assistant engineer with a current STCW endorsement, who are employed in a position deemed militarily useful to the Navy.

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[42] As of 2021, the U.S. Air Force ROTC program also administers the U.S. Space Force ROTC programs.

[43] See the current Department of the Navy instructions, "Strategic Sealift Officer Program" OPNAV Instruction 1534.1E, December 1, 2017, available at https://www.secnav.navy.mil/doni/directives/01000%20military%20personnel%20support/01-500%20military%20training%20and%20education%20services/1534.1e.pdf.

[44] 46 CFR § 310.7, Federal student subsistence allowances and student incentive payments.

[45] The Strategic Sealift Midshipman Program (SSMP) is the Navy's term for the undergraduate education and training program; upon successfully completing that program, USMMA and SMA graduates are assigned the Strategic Sealift Officer Program (SSOP). (See "Strategic Sealift Midshipmen Program, United States Naval Reserve, Administration and Management Annex, Appendix R," NSTC directive M-1533.2D, December 2019, available at https://www.netc.navy.mil/commands/naval-service-training-command/rod_and_appendices/).

Table 5-4 lists the maritime academies and CoEs associated with an Army ROTC unit, Navy ROTC unit, or a Navy SSO program. In some cases, the association is through a "cross-town" affiliation with another institution of higher education.

Table 5-4: Army or Navy Units at Maritime Academies and Centers of Excellence

Institution	State	Classification	Offers USCG Courses (May 2021)	Army ROTC	Navy ROTC	Navy SSOP
California Maritime Academy	CA	Maritime Academy	X	-	Affiliated	On campus
Community College of Rhode Island	RI	Center of Excellence		Affiliated	Affiliated	-
Great Lakes Maritime Academy	MI	Maritime Academy	X	-	-	On campus
Kingsborough Community College	NY	Center of Excellence	X	Affiliated	-	-
Maine Maritime Academy	ME	Maritime Academy	X	-	On campus	On campus
Massachusetts Maritime Academy	MA	Maritime Academy	X	Affiliated	-	On campus
Mira Costa Community College	CA	Center of Excellence		Affiliated	-	-
Orange Coast College	CA	Center of Excellence	X	Affiliated	-	-
SUNY Maritime College	NY	Maritime Academy	X	-	On campus	On campus
Texas A&M Maritime Academy	TX	Maritime Academy	X	-	Affiliated	On campus
U.S. Merchant Marine Academy	NY	Center of Excellence	X	(See Note)	(See Note)	On campus
University of Alaska Fairbanks	AK	Center of Excellence		On campus	-	-
University of Alaska Anchorage	AK	Center of Excellence	X	On campus	-	-

Note: Representatives of each armed service (DoD and DHS) are assigned to the faculty or staff of the U.S. Merchant Marine Academy, and graduates are eligible for direct commissions into any of the services.

(Source: Maritime Administration, U.S. Army, and U.S. Navy)

5.4.3. Educational Assistance Programs for Active Duty Personnel

There are additional DoD programs that could provide financial assistance to active duty personnel who are also pursuing maritime education and training.

1. Montgomery GI Bill for Active Duty. Military personnel who are currently on active duty may be eligible for education benefits through the Montgomery GI Bill (MGIB). However, due to the challenges in scheduling training while also meeting one's core military service requirements, most service members are likely to defer use of these benefits until after they have left the service, at which time the program benefits would be administered by the Department of Veterans Affairs (see Section 5.5.2).

2. Servicemembers Civil Relief Act. Provisions of this act could benefit military personnel, since it limits the interest rate on student loans taken prior to entering the military or being called to active duty is limited to 6.0 percent during an individual's active duty military service.[46] This law applies to both Federal and private student loans.
3. Tuition Assistance Programs. The military services administer programs that offer financial assistance for active duty service members. These programs cover the tuition costs for courses taken (while in an off-duty status) at a college, university, or vocational/technical institution, whose regional or national accreditation is recognized by the U.S. Department of Education. (For example, see https://www.navycollege.navy.mil/sailors/tuition-assistance-ncpace.htm.)

5.4.4. Other DoD Scholarship Programs

DoD and its component services have a wide variety of targeted scholarship programs that strengthen specific areas of national security interest. A review of these programs did not identify any specifically directed towards merchant marine careers. However, certain individuals might be able to structure an educational and career path that meets a specific program need while also yielding a mariner credential.

For example, the Army's Minuteman Campaign is a four-year Guaranteed Reserve Forces Duty scholarship that covers full tuition and fees or provides $10,000 for room and board at colleges and universities served by an Army ROTC program. In return, the U.S. Army Reserve guarantees a reserve commission with an eight-year service obligation. Scholarship recipients also receive a monthly stipend of $420 and a yearly book allowance of $1,200. Individuals who participate in this program could potentially design an educational program and mariner career path compatible with their Army Reserve service obligation. (See https://www.usar.army.mil/MinutemanCampaign/.)

5.5. Department of Veterans Affairs

Department of Veterans Affairs (VA) education benefits help veterans, service members, and their qualified family members with programs that pay for college tuition or other training, career counseling, and other consulting services to provide guidance on schools or training programs. The VA provides this service through a Personalized Career Planning and Guidance (PCPG) program to veterans and their dependents who are eligible for a VA education benefit. These financial assistance programs are available to service members while they are on active duty. However, due to the challenges in scheduling academic classes while also meeting military service requirements, most service members defer these benefits until after they have left the service. The VA works closely with the DOL Veterans' Employment and Training Service to provide dedicated career transitioning, employment, and training services for veterans (see Section 5.2.7).

5.5.1. Post-9/11 GI Bill

The Post-9/11 GI Bill is an education benefit program for individuals who served on active duty after September 10, 2001. Veterans may be eligible if they served at least 90 aggregate days on active duty after that date or were honorably discharged from active duty for a service-connected disability after serving 30 continuous days following September 10, 2001. The Post-9/11 GI Bill is the most extensive

[46] 50 U.S.C. App., §§ 501-596, Servicemembers Civil Relief Act, available at https://www.justice.gov/crt/50-usc-app-501-596.

education benefit program administered by the VA. In FY 2018, the Post-9/11 GI Bill program provided $10.7 billion in tuition and fee payments to more than 700,000 veterans and other beneficiaries.[47] (See https://www.va.gov/education/about-gi-bill-benefits/post-9-11/.)

The level of individual financial assistance varies. For example, a veteran who attends a public school as an in-state student is eligible to receive reimbursements for all tuition and fee payments. Individuals attending private institutions or non-college degree-granting institutions may receive up to $26,042 per academic year (based on current rates).[48] Veterans may also be eligible for a monthly housing allowance, a stipend for books and supplies, and a one-time rural benefit (for qualified veterans).

Veterans participating in recognized apprenticeship or on-the-job training programs may also be eligible for a monthly housing allowance: 100 percent of the allowance during the first six-month apprenticeship period, decreasing incrementally every six months to 20 percent after two years. Veterans in these programs may also be eligible to receive a stipend for books and supplies. Provisions of the Post-9/11 GI Bill allow the service member to transfer all or part of their unused education benefits to a spouse or child. There are some significant restrictions, such as a minimum service of 10 years and a requirement that the service member must decide to transfer benefits while still on active duty (prior to transition).

5.5.2. Montgomery GI Bill-Active Duty

The Montgomery GI Bill-Active Duty (MGIB-AD) education benefit program is structured differently than the Post 9/11-GI Bill.[49] Eligibility varies, based on different combinations of dates of service, length of enlistment, etc. (See https://www.va.gov/education/about-gi-bill-benefits/montgomery-active-duty/.) Table 5-5 lists current MGIB-AD benefits for individuals enrolled in a training institution who have also completed a minimum enlistment of three years.

Table 5-5: Current Benefits for Participants in MGIB-AD Institutional Training

Training Time	Monthly Benefit
Full time student	$2,122.00
3/4 time student	$1,591.50
1/2 time student	$1,061.00
Less than 1/2 time student but more than 1/4 time	$1,061.00
1/4 time or less	$530.50

(Source: Department of Veterans Affairs at https://www.benefits.va.gov/)

5.5.3. Montgomery GI Bill-Selected Reserve

The Montgomery GI Bill Selected Reserve (MGIB-SR) program offers up to 36 months of education and training benefits for members of the Army, Navy, Air Force, Marine Corps or Coast Guard Reserve, Army National Guard, or Air National Guard.[50] (See https://www.va.gov/education/about-gi-bill-benefits/

[47] "The Post-9/11 GI Bill: Beneficiaries, Choices, and Cost," Washington, DC: Congressional Budget Office, May 2019, available at https://files.eric.ed.gov/fulltext/ED603137.pdf.
[48] "Post-9/11 GI Bill (Chapter 33) Payment Rates for 2021 Academic Year (August 1, 2021 - July 31, 2022)," Department of Veterans Affairs, web, available at https://benefits.va.gov/GIBILL/resources/benefits_resources/rates/ch33/ch33rates080121.asp.
[49] 38 U.S.C. part III, Chapter 30: All-Volunteer Force Educational Assistance Program.
[50] 10 U.S.C. part IV, Chapter 1606: Educational Assistance for Members of the Selected Reserve.

montgomery-selected-reserve/.) Table 5-6 lists current MGIB-SR benefits for eligible veterans who are enrolled in a training institution.

Table 5-6: Current Benefits for Participants in MGIB-SR Institutional Training

Training Time	Monthly Benefit
Full time student	$397.00
3/4 time student	$297.00
1/2 time student	$198.00
Less than 1/2 time student	$99.25

(Source: Department of Veterans Affairs at https://www.benefits.va.gov/)

5.5.4. Veteran Readiness and Employment

Veteran Readiness and Employment (VR&E) services are available to veterans with service-connected disabilities to support job training, employment accommodations, resume development, and job-seeking skills coaching. There are also benefits available to employers to help them hire or rehire a disabled veteran, including salary subsidies, assistive technology, non-paid work experiences, and special employer incentives. The VR&E service may also extend vocational counseling and support to family members. (See https://www.benefits.va.gov/vocrehab/index.asp.)

5.5.5. Other VA Financial Assistance Programs

There are other VA programs available to veterans, their dependents, or survivors that could be used to pursue a merchant mariner career. However, due to their relatively narrow scope of eligibility, these are unlikely to result in significant accessions in the pool of credentialed mariners.

1. The Marine Gunnery Sergeant John David Fry Scholarship is available to children and dependents of veterans who died in the line of duty on or after September 11, 2001. The Fry Scholarship provides money for tuition (full in-state tuition costs at public schools and up to $22,805 per year for training at private or out-of-state schools), a housing allowance, and a stipend for books and supplies. (See https://www.va.gov/education/survivor-dependent-benefits/fry-scholarship/.)
2. The Survivors' and Dependents' Educational Assistance program is available to the children or spouse of a veteran or service member who has died, was captured or is missing, or is disabled. This program can help pay for school or job training. (See https://www.va.gov/education/survivor-dependent-benefits/.)
3. The Edith Nourse Rogers Science Technology Engineering Math (STEM) Scholarship allows some eligible veterans and dependents in high-demand fields to extend their Post-9/11 GI Bill or Fry Scholarship benefits for an additional nine months. According to the VA's current list of qualifying fields, programs in naval architecture and marine engineering—two programs offered at each of the maritime academies and some of the colleges and universities identified in Section 4.2)—would qualify for this scholarship.[51] (See https://www.va.gov/education/other-va-education-benefits/stem-scholarship/.)

[51] Department of Veterans Affairs, "STEM Designated Degree Program List," January 1, 2020 (updated March 17, 2021), available at https://benefits.va.gov/gibill/docs/fgib/STEM_Program_List.pdf.

5.6. Other Federal Programs and Initiatives

This study identified a small number of other Federal student aid or financial assistance programs that could be used to fund mariner education or training. These programs have relatively narrow eligibility criteria, so they are unlikely to represent significant sources of accessions into the mariner workforce.

5.6.1. U.S. Coast Guard

Members of the USCG possess many of the skills needed by credentialed mariners, and Coast Guard service could be an alternative career path to become a credentialed civilian mariner. However, each educational assistance program currently in place for USCG personnel requires a minimum service commitment of three to six years, which generally precludes the immediate pursuit of a merchant marine career. (The Strategic Sealift Officer Program does allow participation by USCG reservists; see Section 5.4.2.)

5.6.2. Segal AmeriCorps Education Award

Individuals participating in the AmeriCorps program who successfully complete their term of service and enroll in the National Service Trust are eligible to receive the Segal AmeriCorps Education Award. Individuals can use the award to repay qualified student loans or pay current educational expenses at eligible institutions of higher education and training programs. In some cases, the benefits can be transferred to children or grandchildren. Eligible institutions include higher educational institutions, both domestic and foreign, that currently participate in the Department of Education's Title IV student aid programs. This category includes most post-secondary colleges, universities, and technical schools.

The level of a full-time education award is tied to the maximum amount of the U.S. Department of Education's Pell Grant (see Section 5.1.1.1); the current maximum Pell Grant award is $6,495 for the 2021–22 award year (July 1, 2021 to June 30, 2022). AmeriCorps members may earn up to the value of two full-time education awards and have seven years from the date they receive the award to use it. (See https://americorps.gov/members-volunteers/segal-americorps-education-award.)

5.6.3. Public Safety Officers' Education Assistance (PSOEA) Program

The Bureau of Justice Assistance (BJA) of the Department of Justice administers the Public Safety Officers' Education Assistance (PSOEA) Program to provide financial assistance for higher education purposes to the spouses and eligible children of local police, fire, and emergency public safety officers killed or permanently disabled in the line of duty. PSOEA benefits are available to public safety officers' spouses and children for 45 months of full-time education or training or a proportional term for a part-time program. The BJA reviews approximately 500 education assistance claims each year. In FY 2021, Congress appropriated $24.8 million for the entire Public Safety Officer Benefit Program; it is unknown what portion will be awarded as educational assistance grants under the PSOEA program.[52] (See https://psob.bja.ojp.gov/benefits/.)

[52] Consolidated Appropriations Act, 2021.

5.6.4. John H. Chafee Foster Care Independence Program

The Children's Bureau, Administration for Children and Families of the Department of Health and Human Services administers the John H. Chafee Foster Care Independence Program, which helps current and former foster care youth through the Educational and Training Vouchers Program. Funds are administered via grants to States and Tribes. Activities and programs include help with education and employment. This study did not determine whether any States or Tribes had programs in place to leverage this program's resources to support mariner training. Students can get up to $5,000 per academic year based on the cost of attendance and available funds. (See https://www.acf.hhs.gov/cb/grant-funding/john-h-chafee-foster-care-independence-program.)

5.6.5. SNAP Employment and Training (E&T) Program

Individuals participating in their state's Supplemental Nutrition Assistance Program (SNAP) program may be eligible to receive employment and training benefits. The U.S. Department of Agriculture covers the cost of SNAP benefits, but individual States structure their respective programs and administer SNAP funds. Since each State structures and administers their own SNAP E&T program, they rely on local partners (typically private businesses and charitable organizations) to provide the job opportunities or training programs. This study did not determine whether any States had programs in place that use their SNAP E&T program to support mariner training.

5.7. Section Summary, Sources of Federal Financial Assistance

This section has identified nearly 40 different Federal programs that could support mariner education and training. Some programs, such as those administered by DOT, provide direct support. Other programs—such as those administered by ED or DoD, or State programs funded by DOL—support mariner training indirectly by providing financial assistance to eligible individuals. In some instances, the actual level of spending that supports mariner training could be ascertained. However, for the majority of the programs, the specific amount dedicated to mariner education and training could not be determined.

(Credit, clockwise from upper left: California Maritime Academy, Massachusetts Maritime Academy, Maritime Administration, SUNY Maritime College, and Maine Maritime Academy.)

6. Identifying Eligible Individuals

The second objective of this study was to "identify individuals eligible for assistance." This was interpreted to mean identifying a typical applicant profile, not identifying specific individuals or groups of individuals. The basic criteria used to determine eligibility was that an individual would need to be eligible to receive a merchant mariner credential and eligible to participate in at least one Federal financial assistance program. This section assesses what factors affect an individual's overall eligibility using three metrics:

1. Eligibility for a Transportation Worker Identification Credential,
2. Eligibility for a Merchant Mariner Credential, and
3. Eligibility for a Federal financial assistance program.

An individual must meet all elements of the first two sets of criteria and be eligible for at least one Federal financial assistance program to be considered "eligible for assistance" for the purpose of this analysis.

6.1. Eligibility for a Transportation Worker Identification Credential

A Transportation Worker Identification Credential (commonly called a "TWIC" or "TWIC card") is a mandatory prerequisite for individuals serving aboard merchant marine vessels. The Maritime Transportation Security Act of 2002 requires the TWIC for both merchant mariners and other workers who access secure areas of the nation's maritime facilities.[53] According to 46 CFR § 10.206, "The failure to obtain or hold a valid TWIC serves as a basis for the denial of an application for an original, renewal, new endorsement, duplicate, or raise of grade of a Merchant Mariner Credential and may serve as a basis for suspension and revocation under 46 U.S.C. §§ 7702 and 7703."

The TWIC program is administered by the Transportation Security Administration (TSA) of the Department of Homeland Security (DHS). Individuals eligible to apply for a TWIC include U.S. citizens, lawful permanent residents, naturalized citizens or nonimmigrant individuals, individuals granted asylum, or refugees in lawful status. Individuals apply through TSA's *Universal Enroll* online application system.[54] As part of the application process, DHS conducts a background check to confirm eligibility, including an examination of the applicant's prior conduct, including criminal convictions, arrest warrants, and indictments.[55] DHS considers three categories of offenses:

1. Permanent disqualifying criminal offenses are convictions for serious offenses (e.g., murder, espionage, treason), which permanently bar an applicant from acquiring a TWIC.
2. Interim disqualifying criminal offenses are a set of lesser offenses that disqualify an applicant who was convicted, pled guilty (including "no contest"), or was found not guilty by reason of insanity within seven years of the date of their application, or within five years after release from prison for such offense.

[53] Maritime Transportation Security Act of 2002 (Pub. L. 107–295, 116 Stat. 2073), codified at 46 U.S.C. § 70105, Transportation security cards.
[54] "Universal Enroll," Department of Homeland Security, web, available at https://universalenroll.dhs.gov/programs/twic.
[55] "Disqualifying Offenses and Other Factors," Transportation Security Administration, web, available at https://www.tsa.gov/disqualifying-offenses-factors.

3. Under want, warrant, or indictment. Individuals who face potential conviction with any of the above offenses are temporarily barred from acquiring a TWIC until the warrant is released or the indictment is dismissed.

Assessment of TWIC eligibility criteria: These requirements are not overly restrictive, given the underlying security needs of the transportation industry. However, it is likely that the requirements could disqualify some potential applicants.

6.2. Eligibility for a Merchant Mariner Credential

The underlying eligibility requirements for an MMC are established by the USCG and set forth in 46 CFR, Part 10. Of particular note are requirements in the following categories.

- Citizenship. Only individuals with valid U.S. citizenship may apply for an officer credential. For other credentials, an individual may be a U.S. citizen or non-citizen, as defined under section 101(a)(3) of the Immigration and Nationality Act (8 U.S.C. § 1101 *et seq*.), who is lawfully admitted to the U.S. for permanent residence.
- Medical certification. All MMC applicants must meet certain minimum standards for physical ability (e.g., balance or capable of climbing ladders).[56] There are also requirements regarding eyesight, color perception, and hearing, with certain credentials requiring standards that are more stringent.
- Criminal convictions. A criminal conviction does not disqualify an individual from obtaining, renewing, or upgrading an MMC. However, the USCG may deny an MMC if it determines that an applicant is not a "safe and suitable person" or "who cannot be entrusted with the duties and responsibilities of the MMC or endorsement applied for."[57]
- National Driver Register review. An MMC application may be denied or delayed if an individual has been convicted of operation of a motor vehicle while under the influence of, or impaired by, alcohol or a controlled substance; and any traffic violations arising in connection with a fatal traffic accident, reckless driving, or racing on the highways.[58]
- Age. The minimum age requirements for a variety of MMCs are detailed in Table 6-1.

Table 6-1: Minimum Age Requirements for Typical Merchant Mariner Credentials

Credential	Minimum Age
RFPNW or RFPNW (entry-level ratings)	16 years old
National Able Seaman (deck) or National QMED (engine)	18 years old
OICEW or Designated Duty Engineer (1000 HP or more)	18 years old
OICNW (500 GRT or more)	19 years old
National 3rd Mate or 3rd Assistant Engineer (unlimited, oceans)	19 years old
National Mate (500 GRT) or National Assistant Engineer (Limited)	19 years old
National 2nd Mate or 2nd Assistant Engineer (unlimited, oceans)	21 years old
National Chief Mate or 1st Assistant Engineer (unlimited, oceans)	21 years old
National Master or Chief Engineer (unlimited, oceans)	21 years old

(Source: USCG National Maritime Center https://www.dco.uscg.mil/nmc/checklist/)

[56] 46 CFR § 10.301, Medical Certification, General requirements.
[57] 46 CFR § 10.211, Criminal Record Review.
[58] 46 CFR § 10.213, National Driver Register.

Assessment of MMC eligibility criteria: Similar to the eligibility requirements for the TWIC card, eligibility requirements for the MMC are reasonable and not overly restrictive, but do narrow the field of potential applicants for mariner credentials. For example, the medical/physical requirements would prevent individuals with limited mobility, color perception loss, or other medical conditions from pursuing a maritime career. The medical/physical requirements may also limit the eligibility of certain disabled veterans.

6.3. Eligibility for Federal Financial Aid

Each of the Federal financial aid programs identified in this study (Section 5) has its own set of eligibility criteria. These criteria generally cover several of the areas detailed in Table 6-2.

Table 6-2: Typical Eligibility Criteria for Various Federal Financial Aid Programs

Eligibility Criteria	Discussion
Citizenship	U.S. citizens, U.S. nationals, U.S. permanent residents, and certain special cases (e.g., refugee, granted asylum) are generally eligible for Department of Education student aid programs.
Financial need	An individual must demonstrate financial need for several types of grants or loans. Financial need is determined through the FAFSA (Free Application for Federal Student Aid) process.
Age	Some loan and grant programs have age limitations.
High-school graduate or equivalent	Some loan and grant programs require that an individual has graduated high school or passed the General Educational Development (GED) tests.
Enrollment or acceptance for enrollment	All loan and grant programs generally require that an individual is currently enrolled or has been accepted for enrollment as a regular student in an eligible degree or certificate program.
Enrollment status	All loan and grant programs generally require a minimum of half-time enrollment for an individual to remain eligible for initial or continued financial aid. Some programs do provide funding for less than half-time programs.
Academic progress	Students must make satisfactory academic progress—good enough grades and complete enough classes (e.g., credits or hours)—in order to continue receiving Federal student aid. Each academic institution establishes its own standards for satisfactory academic progress.
Residency	Individual States administering DOL-funded programs (e.g., WIOA programs) typically require that an individual
Program-specific requirements	Some of the financial aid programs have other specific restrictions that limit eligibility. For example, VA programs are only available for veterans and certain family members. Other programs may be limited to individuals receiving SNAP assistance, while other programs may only be available to unemployed workers.

(Source: Volpe Center)

Assessment of Federal financial aid eligibility criteria: Similar to the eligibility requirements for the TWIC and MMC, the eligibility requirements for Federal financial aid appear reasonable and not overly restrictive. However, they could preclude certain individuals from accessing Federal financial assistance to enroll in certain mariner education or training programs.

7. Findings and Conclusions

This section addresses the two primary objectives set forth by Congress: 1) to identify Federal financial assistance available for the training of merchant mariners, and 2) to identify individuals eligible for that assistance. Additional findings and conclusions deemed pertinent to this study are also included.

7.1. Finding 1: Although Federal Financial Assistance Programs are Adequate, Gaps Do Exist.

This study found that Federal financial assistance for mariner education and training is generally adequate for some credentialing paths. There are various funding sources available, and a reasonable range of eligibility criteria, which together suggests an adequate pool of potential applicants eligible to participate in at least one assistance program. With respect to the availability of funds, these appear to be adequate. There is no indication that the funding available through many of these existing programs is insufficient to meet the potential demand.

Two potential gaps were identified. These gaps are described below and addressed in the subsequent sections, which describe each department's financial assistance programs.

1. It appears that access to Federal financial assistance programs may be limited for those individuals pursuing a maritime credential outside of a full-time college, university, or maritime academy program. For example, for an individual pursuing a limited license through a maritime training center or proprietary school.
2. It appears that Federal financial assistance is generally not available for individuals who need education or training to renew or advance an existing mariner credential.

7.1.1. Department of Education Programs

The Federal student aid programs offered by ED are broad in scope and expansive in funding and represent the most significant potential source of Federal financial aid. The seven maritime academies (described in Section 4.1) that administer USCG-approved unlimited credentialing programs are all certified by ED to participate in Federal student aid programs (e.g., Pell Grants, Direct Loans). Many other colleges or universities that provide mariner training (described in Section 4.2) also participate in Federal student aid programs; in some cases, these student aid programs may be administered by an institution's parent college or university.

We reviewed student financial aid data available through the Department of Education Integrated Postsecondary Education Data System (IPEDS) for several of the institutions of higher education that provide mariner education to determine the most current participation rates in ED student aid programs (see Table 7-1).

Table 7-1: Student Participation in Financial Aid Programs, 2018–2019

IPEDS ID	Institution Name	State	Any Grant or Scholarship Aid	Pell Grants	Federal Student Loans
111188	California State University Maritime Academy	CA	66%	27%	48%
208415	Clatsop Community College	OR	48%	33%	10%
158662	Delgado Community College	LA	62%	60%	50%
113980	El Camino Community College	CA	55%	28%	0%
161299	Maine Maritime Academy	ME	69%	27%	78%
166692	Massachusetts Maritime Academy	MA	46%	17%	76%
171483	Northwestern Michigan College	MI	48%	30%	26%
120342	Orange Coast College	CA	49%	21%	2%
227979	San Jacinto Community College	TX	43%	23%	3%
434061	South Louisiana Community College	LA	96%	59%	42%
196291	SUNY Maritime College	NY	56%	22%	50%
228723	Texas A&M University-College Station	TX	57%	22%	31%
233772	Tidewater Community College	VA	50%	38%	19%
197027	U.S. Merchant Marine Academy	NY	13%	7%	6%
102632	University of Alaska Southeast	AK	40%	18%	18%
160658	University of Louisiana at Lafayette	LA	70%	34%	46%
157483	West Kentucky Community and Technical College	KY	78%	33%	13%

(Source: Department of Education, National Center for Education Statistics, IPEDS Database Queries)

Based on an analysis of Table 7-1, it appears that students are using the ED student aid programs to finance their mariner education or training. Since the ED student financial aid programs are principally need-based, we were unable to determine the overall impact of these programs to support mariner training. For example, were there potential students interested in pursuing a mariner credential through these institutions who were unable to devise a funding and financial aid package affordable to them or their families?

Several colleges or universities certified to participate in ED programs do offer individual mariner training courses through their continuing or professional education programs. However, in these cases, students would also be subject to the eligibility criteria of the respective financial assistance program, such as minimum academic course load or enrollment status (i.e., being a full-time or half-time student), which may limit them to only certain types of financial assistance.

One finding of this study is that many, if not all, of the other institutions that offer USCG-approved training programs—such as maritime union training schools, proprietary schools, or maritime training centers—do not participate in ED student aid programs. This conclusion is based on a comparison of the list of USCG-approved course providers against the ED list of approved Federal student aid program participants.[59] Some of these providers offer an extensive catalog of USCG-approved courses. Yet,

[59] Postsecondary Education Participants System, Federal Student Aid, U.S. Department of Education, web, available at https://www2.ed.gov/offices/OSFAP/PEPS/dataextracts.html (data extract on May 5, 2021).

without access to Federal student aid, some potential students may be unable to avail themselves of these training resources.

7.1.2. Department of Labor Programs

A review of the workforce education and training programs sponsored by DOL suggests that there are adequate mechanisms in place that could be used to fund some education or training for merchant mariners. However, since State agencies administer these programs, the extent to which each State actually funds mariner training was not determined.
Due to the eligibility requirements and other restrictions imposed on many DOL-funded programs, these resources are most likely limited to use by veterans, younger individuals entering the workforce, individuals on public assistance, and displaced or unemployed workers. It is also likely that only a limited range of mariner training programs could be funded through these programs, such as the basic training studies needed to become an entry-level rating (e.g., ordinary seaman or wiper) or a course to advance to able seaman.

Many DOL-funded programs focus on entry-level job seekers, young adults entering the workforce, or individuals seeking career advancement, these programs represent an excellent opportunity to meet broad Federal objectives to increase the maritime labor pool. Programs organized under provisions of the Workforce Innovation and Opportunity Act (WIOA) represent a significant potential source of financial assistance. The results of a review of workforce agency websites from a sampling of inland riverine and coastal States are below.

- Alaska. The Department of Labor and Workforce Development Division of Employment and Training Services website (https://jobs.alaska.gov/jobseek/) had several maritime job listings and training opportunities (including a listing of WIOA-eligible maritime training providers). The State has a dedicated initiative focused on strengthening the Alaska maritime workforce (https://labor.alaska.gov/maritimeplan/). In addition, the Alaska Safety Alliance, an independent industry alliance, maintains a comprehensive website on maritime career resources (https://www.alaskasafetyalliance.org/explore-careers/maritime-careers/), which includes job listings and education and training programs.
- Louisiana. A search of the Louisiana Workforce Commission website (https://www.louisianaworks.net/hire/vosnet/Default.aspx) identified several training mariner courses (e.g., Able Seaman, Apprentice Mate) that were eligible for financial assistance under WIOA.
- Mississippi. Searches of the Mississippi Department of Employment Security website (https://mdes.ms.gov/) and its jobs listings (https://wings.mdes.ms.gov/wings/welcome.jsp) did not identify any maritime jobs or maritime training opportunities.
- Missouri. Searches of the Missouri Department of Labor and Industrial Relations (https://labor.mo.gov/) and the Missouri Jobs (https://jobs.mo.gov/) websites did not identify any maritime jobs or maritime training opportunities.
- Oregon. A search of several Oregon employment-related websites identified a handful of maritime jobs but did not identify any mariner training opportunities or maritime apprenticeships. Websites searched included WorkSource Oregon (http://www.worksourceoregon.org/JobSeekers.html), the Oregon Employment Department (https://www.oregon.gov/EMPLOY/Pages/default.aspx), and the Bureau of Labor and Industries (https://www.oregon.gov/boli/Pages/index.aspx).

- Texas. The Texas Workforce Commission website (https://www.twc.texas.gov/jobseekers/training-education) includes a list of 368 WIOA-approved training providers. That list shows that only three institutions offer USCG-approved courses (Del Mar College, Lamar State College Orange, and San Jacinto College).
- Washington. A search of the training opportunities on the Washington State Employment Security Department website (https://esd.wa.gov/jobs-and-training) identified a handful of entry-level positions (e.g., Apprentice Deck Mechanic). Washington's job center system, WorkSource (https://seeker.worksourcewa.com/Resources/TrainingPrograms.aspx), provides general information on WIOA-based program and directs inquiries to a local WorkSource office.

DOL Recognized Apprenticeship Programs appear to hold significant potential to increase entry-level accessions into the mariner workforce, subject to program eligibility and funding limitations. This study did identify at least two potential gaps in the DOL apprenticeship program information available online. Several maritime labor unions have apprenticeship programs. For example, the Harry Lundeberg School of Seamanship (operated by the Seafarers International Union) has an apprentice program for unlicensed ratings, which is registered with the U.S. Department of Labor.[60] Similarly, the Maritime Institute of Technology and Graduate Studies (MITAGS) (affiliated with the International Organization of Masters, Mates, and Pilots) offers an apprenticeship program "approved by the United States Department of Veterans Affairs and honors the Post 9/11 GI Bill for eligible veterans and their dependents."[61] However, neither program appears to be included in the DOL apprenticeship database, despite extensive search inquiries of the site (https://www.apprenticeship.gov/).

The DOL Veterans' Employment and Training Service (VETS) program also appears to hold significant potential to increase accessions into the mariner workforce, at both the entry-level and potentially at higher credential levels. The career transition programs of DoD, DOL, and the VA are significant resources that directly support the Military to Mariner initiative.

7.1.3. Department of Transportation

Overall, the mariner credentialing programs administered by DOT are quite extensive and serve as a significant source of credentialed mariners.

U.S. Merchant Marine Academy. The USMMA program provides a fully funded education and currently produces approximately 240 mariners with unlimited credentials each year. The competitive admissions process and other entry requirements naturally limit the pool of eligible individuals who could pursue this career path; however, this is not considered an impediment.

State Maritime Academy Support Program. MARAD's direct support program for the State Maritime Academies is appropriated annually. FY 2021, Congress appropriated $9.8 million towards operational support and training vessel fuel.

Training Vessel Program. MARAD's highly successful training vessel program is reflective of the Federal Government's commitment to mariner training. In FY 2021, Congress appropriated $30.5 million

[60] "Apprentice Program Overview," Seafarers International Union, web, available at https://www.seafarers.org/training-and-careers/admissions/apprentice-program-overview/.
[61] "Maritime Apprenticeship Programs," Maritime Institute of Technology and Graduate Studies, web, available at https://www.mitags.org/maritime-apprenticeship-programs/.

towards training vessel maintenance and repair. When combined with the $1.61 billion appropriated by Congress towards training ship recapitalization, the training vessel program is one of the most effective Federal mechanisms in place to support mariner training.

Incentive Payment Program. This study found that all SMAs participate in the existing SIP Program. However, given the gaps in Federal financial assistance identified earlier (discussed in Section 7.1), MARAD could evaluate whether it should create a new incentive payment program or employ some other funding mechanism that supports a different set of mariners—such as new mariners seeking limited licenses, or current mariners seeking to renew or upgrade an existing credential.

Centers of Excellence for Domestic Maritime Workforce Training and Education program. The Centers of Excellence for Domestic Maritime Workforce Training and Education (CoE) program is in its nascent stages of development and implementation. Still, it would appear to hold significant potential to strengthen MARAD's overall mariner education and training effort. In particular, the CoE program is structured to target a different set of institutions involved in the training and credentialing process, separate from the existing officer or licensed credentialing pathway through the maritime academies. Consequently, CoEs are likely to attract a different set of mariner candidates. As of FY 2021, the CoE program has not received any dedicated appropriations. In addition, the program's enabling legislation (codified at 46 U.S. Code § 54102) does not appear to authorize any direct financial assistance (whether loans, grants, or incentive payments) to CoE program participants.

Military to Mariner program. The combined efforts of DoD, MARAD, USCG, and the CMTS to facilitate the entry of former military personnel into the merchant mariner are generally adequate. Each partner maintains a website that provides individuals with a wide range of information on eligibility requirements and the credentialing process. The DOL and the VA also support counseling and training programs for service members transitioning to civilian careers. Although we did not determine the extent to which its partners were actively promoting the M2M program, this program would appear to hold significant potential, mainly through increased coordination with corresponding DOL and VA programs.

7.1.4. Department of Veterans Affairs

Montgomery GI Bill and the Post-9/11 GI Bill programs. Funding for education and training through the GI Bill programs is available to support veterans transitioning into a maritime career through multiple paths. Veterans can use GI bill benefits to pursue a college-level credentialing program at one of the maritime academies, which would yield an unlimited deck or engine credential. Some veterans may already have sufficient training and experience to meet many of the requirements needed for credentialing and could use their GI Bill benefits to acquire the supplemental training needed to acquire an unlimited credential. Certain GI Bill education benefits can also be transferred to an eligible dependent or family member. Finally, a veteran could use their GI bill benefits to pursue training for a wide variety of lower-level credentials (such as an Able Seaman, QMED, or limited tonnage mate or limited horsepower engineer).

Other VA financial assistance programs could be used by veterans, including veterans with a service-connected disability, their dependents, or survivors to pursue a merchant mariner career. Given their limited eligibility, however, these programs are unlikely to represent significant sources of accessions into the merchant mariner field.

7.1.5. Department of Defense Programs

Financial assistance programs offered by DoD and its component services are generally excellent, specifically for individuals pursuing a mariner credential via one of the maritime academies (e.g., through the Strategic Sealift Officer and Navy ROTC programs). However, due to the military service obligation associated with other DoD college scholarship programs, it is unlikely that other DoD programs would result in significant accessions into the mariner workforce.

DoD does promote the pursuit of a maritime career for service members who are transitioning back to civilian life. Two DoD websites were identified (see Section 5.3.6) that offer specific information on applying one's military experience towards a mariner credential, as well as training and education requirements, which could be funded through a GI Bill.

7.2. Finding 2: An Adequate Pool of Eligible Individuals Appears to Exist.

Sections 6.1 and 6.2 identified several potential barriers imposed by TWIC or MMC eligibility, which could prevent some individuals from entering this career field. These include age limitations, prohibitions based on certain prior criminal conduct or convictions, prohibitions based on certain medical conditions, or strict physical requirements (e.g., mobility, eyesight, and hearing). In addition, the specific descriptions of each Federal financial assistance program (see Section 5 and Section 6.3) identified instances where each program's eligibility criteria might limit access to specific groups of individuals.

None of these barriers would appear to place an excessive or unreasonable limit on the number of potentially qualified individuals in becoming credentialed mariners. We conclude that there should exist an adequate group of candidates who meet the eligibility requirements to receive a mariner credential and who are able to access one or more sources of Federal financial assistance.

7.3. Finding 3: Awareness of and Access to Information on Federal Financial Assistance Resources for Potential Mariners Needs Improvement.

As described throughout this report, extensive and detailed information resources exist that describe the various Federal financial assistance programs that are potentially available for mariner education and training. Each of the Federal agencies (or their State partners, in the case of DOL-funded programs) have comprehensive websites that outline their respective programs' eligibility criteria, application processes, and other details. While we assess that the level of information is adequate, access to that information could be improved. Early in the research process, it became apparent that no singular information source exists to "connects the dots" between funding and training. It was often unclear whether a particular financial assistance program could be used to pay for mariner education or training. Without that information, an individual might be dissuaded from pursuing a maritime career.

It may be unreasonable or impractical to expect that a single resource should exist, given the myriad missions and requirements of numerous Federal and State agencies. We also recognize that each individual's motivation and personal circumstances are different, and there is no single path to credentialing that is suitable for all. However, there are likely missed opportunities to connect interested and eligible candidates with a Federal financial assistance program without a more

coordinated, integrated strategy in place. At present, the burden falls on the individual to rely upon their own initiative, instincts, intuition, and motivation to seek out answers.

7.4. Limitations on this Study

The findings and conclusions of this study, and the subsequent recommendations, are subject to the following limitations or interpretations.

1. Availability vs. Usage. This study sought to identify what Federal financial assistance programs were available for mariner education and training. Availability was determined based on whether the program's purpose and eligibility criteria could be applied to finance some form of mariner education and training. Determining the degree to which any financial assistance program was actually being used for mariner education and training was beyond the scope of this evaluation.

   Some general conclusions could be drawn where there is sufficient public information available. However, several programs—particularly those funded by the Department of Labor (e.g., WIOA Adult or Dislocated Worker programs)—are administered by State employment or workforce agencies. Although initial research was able to identify some States that promote maritime training through their respective agency programs, we were unable to determine the specific level of expenditure for, or participation in, those state programs by mariners.

2. Eligibility vs. Interest. This study also sought to identify individuals who were potentially eligible to participate in Federal financial assistance programs. Eligibility was determined based on whether an individual could meet all three sets of eligibility criteria: eligible for a TWIC, eligible for an MMC, and eligible for at least one specific financial assistance program. We did not determine the level of potential interest in using Federal financial assistance to pursue a maritime career.

3. Cost of education or training. The USCG issues credentials in more than 65 different categories. Some of the paths to attain these credentials are unique, while others overlap or share individual elements. Given the wide range of credentials and credentialing paths, this study did not determine the specific costs associated with mariner education, training, or credentialing. Examining these education and training paths, then matching them against potential Federal financial assistance programs, could be informative and add detail to the picture. However, such research was beyond the scope of this study.

4. This study is limited to existing programs only. Several proposed initiatives could expand existing programs or create new programs. For example, the current Administration's American Families Plan includes proposals to increase the annual Pell Grant by $1,400 and provide up to two years of free community college education.[62]

[62] "Fact Sheet: The American Families Plan," The White House, April 28, 2021, available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/28/fact-sheet-the-american-families-plan/.

8. Recommendations

The recommendations in this section directly support one or both of the study's focus areas as set forth by Congress. Specifically, these recommendations either 1) seek to promote greater use of, or access to, existing or potential Federal financial assistance programs for the training of merchant mariners, or 2) seek to promote awareness of those programs to eligible new or existing mariners. This section also includes a group of recommendations that concern areas outside the immediate scope of this study, but which indirectly support workforce development. Further analysis in these areas could strengthen MARAD's overall workforce development efforts. It could also expand the types or availability of Federal financial assistance for mariner education and training.

Recommendation 1: Strengthen awareness and access to existing Federal financial aid resources and career development programs.

This study found there are several existing Federal financial aid programs available to individuals that can be used to pursue mariner education and training. However, this study also found that there is a lack of awareness of those programs by potential users. This study also found that awareness could be improved by a more coordinated, all-of-government approach to integrating and sharing information. These recommendations seek to increase awareness and outreach, both among Federal and State governments and potential mariners.

Recommendation 1-A: Increase dialog between MARAD and other Federal and State agencies to promote the pursuit of maritime careers and access to Federal financial assistance.

MARAD participates in several forums that promote dialog and cooperation between Federal agencies, Federal and State governments, and between public agencies and private industry. These include:

- Marine Board of the National Academies of Sciences, Engineering, and Medicine
- Maritime Transportation System National Advisory Committee (MTSNAC)
- Ship Operations Cooperative Program (SOCP)
- U.S. Coast Guard Merchant Marine Personnel Advisory Committee (MERPAC)
- U.S. Committee on the Marine Transportation System (CMTS)

However, given the findings of this study, MARAD should pursue additional lines of communication with those Federal and State agencies with responsibility for, or subject matter expertise in, the administration of training, education, or financial assistance programs. Taking a unified, all-of-government approach would help promote greater awareness of maritime career opportunities at the Federal and State level and help MARAD and its partners achieve their workforce development goals and objectives.

Establishing regular dialog with these stakeholders would also identify potential barriers or service gaps that negatively affect certain paths to pursue a maritime career. Increased communications with the following agencies should be considered.

- U.S. DEPARTMENT OF EDUCATION
    - Office of Career, Technical, and Adult Education, which administers and coordinates programs including those for career and technical education and community colleges.

    - Federal Student Aid, a performance-based organization within ED that administers $120 billion in annual grants, work-study funds, and low-interest loans.
- DEPARTMENT OF LABOR
    - Employment and Training Administration, which administers Federal government job training and worker dislocation programs, and Federal grants to states for public employment service programs.
    - Veterans' Employment and Training Service (VETS), whose mission is to "prepare America's veterans, service members and their spouses, for meaningful careers, provide them with employment resources and expertise, protect their employment rights and promote their employment opportunities."[63] VETS works to aid the transition from military service to the civilian workforce.
    - STATE WORKFORCE DEVELOPMENT AGENCIES. Work with DOL to identify the State workforce and employment agencies in key maritime States. Include outreach to the local Workforce Development Boards, which have strong connections with community industries, educational institutions, and training providers.
- DEPARTMENT OF VETERANS AFFAIRS
    - Veterans Benefits Administration administers VA benefits programs, including those related to the Post-9/11 and Montgomery GI Bills.

Recommendation 1-B: Work with the Department of Education to identify barriers to participation by maritime training institutions in Federal student aid programs.

As discussed in Section 7.1.1, many institutions offering USCG-approved training programs are not certified by the Department of Education to participate in Federal student aid programs. These institutions offer a wide range of courses and represent a potentially significant source of credentialed mariners, particularly for ratings and limited-credential mariners. However, without access to the ED student aid programs, some potential students are likely unable to afford the cost of a mariner credential through these paths.

Through dialog with Department of Education officials (see recommendation 1-A), MARAD should explore this issue in depth. ED officials could determine whether there are any inherent barriers, such as program structure or lack of program accreditation, which prevent ED certification for some or all of these institutions. Should accreditation be a potential barrier, MARAD should encourage private or commercial schools that offer USCG-approved courses to seek program accreditation through one of the Department of Education's recognized accreditation bodies, such as the:[64]

- Accrediting Commission of Career Schools and Colleges (www.accsc.org),
- Accrediting Council for Continuing Education and Training (www.accet.org), or
- Council on Occupational Education (www.council.org).

[63] "About VETS," U.S. Department of Labor, website, available at https://www.dol.gov/agencies/vets/about.
[64] A complete list of accrediting bodies is located at "Accreditation in the United States," U.S. Department of Education, web, available at https://www2.ed.gov/admins/finaid/accred/index.html.

Recommendation 1-C: Promote the use of existing Federal information resources by maritime job seekers.

This study identified several existing Federal resources that provide a wide variety of information on maritime careers and Federal financial assistance programs. These resources include informational websites, interactive career planning websites, and the extensive national network of DOL-funded American Job Centers. Although this study identified some potential gaps or missing information in some resources, MARAD and its stakeholders should vigorously promote the use of these existing Federal resources:

- American Job Centers
- Job Corps
- Career One Stop
- My Next Move
- Apprenticeship.gov

To implement this recommendation, MARAD could undertake an information campaign through its website, social media accounts, email subscriber lists, or newsletters, or through participation in groups such as the Ship Operations Cooperative Program, the U.S. Coast Guard Merchant Marine Personnel Advisory Committee, or the U.S. Committee on the Marine Transportation System.

Recommendation 1-D: Establish a stronger maritime industry presence on the Department of Labor WorkforceGPS website.

WorkforceGPS is a technical assistance website, sponsored by the DOL Employment and Training Administration, which provides focused information for workforce professionals, educators, and business leaders. Users have access to communities of interest, webinars and other training resources, best practices, and relevant evidence-based research. (See https://www.workforcegps.org/.)

As MARAD's workforce development efforts ramp up, the agency could develop a presence on the WorkforceGPS site to participate in existing information-sharing efforts, as well as to promote specific issues, best practices, and other initiatives relevant to maritime workforce opportunities for Federal, State, and industry stakeholders.

Recommendation 2: Promote the Centers of Excellence for Domestic Maritime Workforce Training and Education program.

The Centers of Excellence for Domestic Maritime Workforce Training and Education program is in its early stages of implementation. An opportunity exists to establish operational goals and performance metrics that address the statutory objectives of MARAD, the U.S. Department of Transportation, and Congress to expand technical training pathways. For example, MARAD could:

1. Collaborate with Centers of Excellence to build an integrated information clearinghouse covering career pathways, technical institutions, and federal financial aid programs.
2. Encourage institutions designated or seeking designation as a CoE to obtain institutional accreditation recognized by the Department of Education to enable participation in Title IV federal student aid programs.

3. Encourage CoE institutions to establish cooperative agreements with state workforce development agencies to coordinate maritime vocational training under applicable federal and state workforce statutes.
4. Encourage CoE institutions to actively expand vocational and technical outreach to recruit qualified applicants and strengthen regional industry workforce pipelines.
5. Encourage eligible maritime vocational institutions serving rural, regional, and coastal industrial communities to seek CoE designation..
6. Promote CoE coursework to current credentialed mariners seeking continuing education, license renewals, or credential upgrades.

Recommendation 3: Promote and strengthen the Military to Mariner program.

The Military to Mariner (M2M) program appears to hold significant potential as an accession source of credentialed mariners.

Recommendation 3-A: Increase efforts to promote the Military to Mariner program through Federal and State agencies serving veterans.

While the basic framework is in place for the M2M program to provide information on maritime careers to transitioning service members and veterans, additional coordination and dialog with the Department of Labor Veterans' Employment and Training Service and their State agency partners could help increase awareness of the M2M initiative within a key Federal agency supporting veterans. Establishing an ongoing dialog with the Department of Education and the Department of Veterans Affairs would also be valuable in identifying ways to promote the M2M program (see Recommendation 1-A, above).

Recommendation 3-B: Explore the use of GI Bill education benefits for maritime education and training by a service member's dependents.

A transitioning service member, while still on active duty, may transfer the education benefits provided by the various GI Bills to their eligible dependents. Consequently, those benefits represent a potential source of Federal financial assistance. However, the extent to which those education benefits go unused by the service member themselves is unknown. Through increased dialog with the Department of Veterans Affairs (see Recommendation 1-A, above), MARAD could study this issue and, if appropriate, promote the transfer of a transitioning service member's benefits to eligible dependents for maritime training and education. MARAD could promote this option through the M2M program, the DOL Veterans' Employment and Training Service, and other vehicles.

Recommendation 4: Further study and evaluation.

This study identified that access to Federal financial assistance programs may be limited for those individuals pursuing a maritime credential outside of a full-time college, university, or maritime academy program and that Federal financial assistance is generally not available for individuals who need education or training to renew or advance an existing mariner credential. Further research and assessment of this gap could better inform Federal policy and decision-making. As MARAD develops its

merchant mariner recruitment, training, and retention strategic plan, the agency should evaluate this issue in order to support that effort.[65]

For example, given the gaps in Federal financial assistance identified earlier (discussed in section 7.1), MARAD could evaluate whether there is a need for a new incentive payment program or another funding vehicle to target the education and training needs of a different set of new or existing mariners. Eligibility for the existing SIP Program is restricted by law to students attending the State Maritime Academies. This limits participation to those individuals pursuing an unlimited credential through a four-year, degree-granting, collegiate program.

Further study could be done to evaluate whether a separate incentive payment program might be effective in addressing these gaps. Areas of study could include exploring how institutional and individual eligibility criteria might effectively target a set of critical maritime workforce training needs and objectives beyond those currently met by the SIP Program. This evaluation could also consider other financial mechanisms that might be used to fund maritime education or training (e.g., loans, grants, or stipends). Establishing any such funding program would require legislation and regulation. Further study could help inform Congress as it explores new ways to improve licensed and unlicensed merchant mariner access to assistance.

(Credit: U.S. Navy photo by Mass Communication Specialist 1st Class Collin Turner)

[65] As required by the William M. (Mac) Thornberry National Defense Authorization Act for Fiscal Year 2021 (Pub. L. 116-283, Section 3508(a)).

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