



U.S. Department of Transportation

**Maritime Administration**

# MARITIME WORKFORCE WORKING GROUP REPORT



U.S. Maritime Transportation System National Advisory Committee (MTSNAC) and the MWWG in consultation with Coast Guard Merchant Marine Personnel Advisory Committee (MERPAC) and the Committee on Marine Transportation Systems (CMTS)

MARITIME ADMINISTRATION



## Table of Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>INTRODUCTION .....</b>	<b>3</b>
The Subcommittee Charter .....	3
<b>BACKGROUND.....</b>	<b>4</b>
Surge Fleet Mariner Credential .....	6
Merchant Mariner Credentials .....	6
1 <sup>st</sup> Criterion: Shipboard Department .....	6
2 <sup>nd</sup> Criterion: .....	7
3 <sup>rd</sup> Criterion:.....	7
4 <sup>th</sup> Criterion .....	8
“Other” or Specialized Criteria .....	8
Medical Certificate.....	9
Transportation Worker Identification Card (TWIC) .....	10
Security Clearance .....	10
Civil Service Mariners Employed by Military Sealift Command .....	11
Credentials and Training.....	13
Force Projection Assumption .....	14
The Working Group .....	14
Methodology .....	16
Estimating the “Available” Qualified Mariner Pool using MMLD Database.....	16
MARAD Methodology for Estimating the Available Qualified Mariner Pool.....	19
MWWG Methodology for Estimating Actively Sailing Mariners with Unlimited Credentials .....	20
Mariner Demand Estimation under Normal and Surge Activation/Sustainment Conditions .....	23
<b>FINDINGS: §3517 D (1).....</b>	<b>25</b>
Summary of Findings Under §3517 D (1) .....	32
<b>FINDINGS: §3517 D (2).....</b>	<b>33</b>
<b>FINDINGS: §3517 D (3).....</b>	<b>35</b>
<b>FINDINGS: §3517 D (4).....</b>	<b>37</b>
<b>APPENDIX A – FY17 NDAA SEC. 3517.....</b>	<b>40</b>
<b>APPENDIX B – CITIZENSHIP AND NAVY RESERVE REQUIREMENTS .....</b>	<b>43</b>
<b>APPENDIX C – TERMS OF REFERENCE .....</b>	<b>44</b>

<b>APPENDIX D – EVALUATION OF MMLD QUERIES AND DATA ON UNLIMITED OCEAN MASTERS .....</b>	<b>50</b>
<b>APPENDIX E – MERCHANT MARINE PERSONNEL ADVISORY COMMITTEE (MERPAC) TASK STATEMENT #100 .....</b>	<b>58</b>
<b>APPENDIX F – USCG SUBMISSION TO MWWG .....</b>	<b>63</b>
USCG FINDINGS: §3517 D (1).....	66
USCG FINDINGS: §3517 D (3).....	70
<b>APPENDIX G – MILITARY SEALIFT COMMAND SUBMISSION TO MWWG.....</b>	<b>71</b>
<b>APPENDIX H – SUBMISSION FROM COMMANDER, NAVY RESERVE FORCES COMMAND TO MWWG .....</b>	<b>73</b>
<b>APPENDIX I – COMMENTS FROM DOD AND USTRANSCOM .....</b>	<b>76</b>
<b>APPENDIX J – COMMENTS FROM CONSORTIUM OF STATE MARITIME ACADEMIES.....</b>	<b>87</b>
<b>APPENDIX K – SUBMISSION FROM AMERICAN MARITIME OFFICERS TO MWWG .....</b>	<b>89</b>
<b>APPENDIX L – CONSOLIDATED COMMENTS FROM AMERICAN MARITIME LABOR ORGANIZATIONS .....</b>	<b>91</b>
<b>APPENDIX M – COMMENTS FROM MARINE FIREMEN’S UNION .....</b>	<b>100</b>
<b>APPENDIX N – COMMENTS FROM MARINE ENGINEERS’ BENEFICIAL ASSOCIATION ...</b>	<b>108</b>
<b>APPENDIX O – COMMENTS FROM SEAFARERS INTERNATIONAL UNION.....</b>	<b>114</b>
<b>APPENDIX P – COMMENTS FROM AMERICAN ROLL-ON ROLL-OFF CARRIER GROUP ..</b>	<b>121</b>
<b>APPENDIX Q – COMMENTS FROM CROWLEY MARITIME CORPORATION .....</b>	<b>123</b>
<b>APPENDIX R – COMMENTS FROM GENERAL DYNAMICS .....</b>	<b>126</b>
<b>APPENDIX S – COMMENTS FROM MAERSK LINE, LIMITED.....</b>	<b>128</b>
<b>APPENDIX T – COMMENTS FROM TOTE SERVICES .....</b>	<b>130</b>
<b>APPENDIX U – COMMENTS FROM USMMA CLASS OF 1967 .....</b>	<b>132</b>
<b>APPENDIX V – UNITED STATES TRANSPORTATION COMMAND COMMENTS.....</b>	<b>134</b>
<b>MEMBERSHIP.....</b>	<b>135</b>
Members .....	135
Subject Matter Experts.....	137
US Department of Transportation – Maritime Administration .....	137

**U.S. Maritime Transportation System National Advisory Committee**  
**Maritime Administration - U.S. Department of Transportation**

---

September 29, 2017

Hon. Mark H. Buzby Maritime  
Administrator  
U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
Washington, D.C 20590

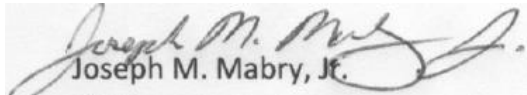
Dear Sir:

Attached herewith is the final report from the Maritime Workforce Working Group.

In December of 2016, the President signed the National Defense Authorization Act for Fiscal Year 2017, Pub. L. No. 113-328. Section 3517 of the Act requires a Maritime Workforce Working Group, to examine and assess the size of the pool of citizen mariners necessary to support the United States Flag Fleet in times of national emergency. The Maritime Workforce Working Group was established and operated as a subcommittee of MTSNAC.

This report was presented by the Co-Chairmen of the Maritime Workforce Working Group to the Maritime Transportation System National Advisory Committee for deliberation, discussion and achievement of consensus on September 27, 2017. It was approved by a voice vote of the MTSNAC at the meeting on September 27, 2017. I am pleased to transmit this to you as a recommendation of the Committee.

Sincerely,



Joseph M. Mabry, Jr.

Joseph M. Mabry, Jr.  
Chairman  
Maritime Transportation System National Advisory Committee



# Maritime Workforce Working Group Report

## EXECUTIVE SUMMARY

---

The Maritime Workforce Working Group (MWWG) was convened in consultation with the Coast Guard Merchant Marine Personal Advisory Committee and the Committee on Marine Transportation System as tasked by Section 3517 of the National Defense Authorization Act for Fiscal Year 2017, Pub. L. 113-328. The assignments for the MWWG included providing answers to significant questions related to the number of United States citizen mariners available to crew the surge sealift fleet in times of national emergency; assessing the impact on the United States merchant marine and the maritime academies if their graduates were assigned to, or required to fulfill, certain maritime positions based on national needs; assessing the accessibility and value of the United States Coast Guard (USCG) Merchant Mariner Licensing and Documentation (MMLD) System and its accessibility and value to the Maritime Administration (MARAD) for the purposes of evaluating that subset of mariners; and making recommendations to enhance the availability and quality of interagency data used by the MARAD for evaluating that pool. A fully qualified mariner for the surge fleet is one who holds a current and valid unlimited tonnage or unlimited horse power oceans license without limitations and meets the required STCW (Standards for Training, Certification, and Watchkeeping) standards; a current and valid Transportation Worker Identification Credential (TWIC); a current and valid USCG STCW Medical Certificate; and when required, holds a current and valid security clearance.

The MWWG estimates that 11,768 qualified mariners with unlimited credentials as described above are available to crew the Ready Reserve Force. The number of mariners required to activate the entire surge fleet as well as operate the commercial fleet concurrently is 11,678 and is documented within this Report. Thus, MWWG estimates that there are sufficient mariners working in the industry to activate the surge fleet if the entire pool of qualified United States citizen mariners identified by MWWG are available and willing to sail when required. This assumption is of paramount importance given the voluntary nature of mariner service. Should the need for mariner services be prolonged through concurrent sustained sealift and commercial fleet operations, it will necessitate crew rotations and accordingly, increased demand for additional qualified mariners from the identified subset. Currently the estimated demand for mariners with unlimited credentials under such operating conditions is 13,607. Thus, the Report documents a deficit of mariners with unlimited credentials to meet the national security and force projection needs. The deficit will escalate if actively sailing qualified mariners from the identified base are unable or unwilling to continue sailing during times of national emergency. It is to be noted that the willingness to sail either commercially or as part of the surge sealift fleet during

such times is presently unknown and beyond measurement. The MWWG strongly endorses biennial survey of the pool of identified subset of qualified mariners to overcome this uncertainty.

The impact on the United States merchant marine should either the United States Merchant Marine Academy or the State Maritime Academy graduates be asked to pursue certain maritime positions based on the overall needs of the U.S. Merchant Marine remains unclear. The graduates of the United States Merchant Marine Academy and those from the State Maritime Academies who receive Student Incentive Payments are obliged to serve when called upon. Aside from this, the Federal government has no legal authority to conscript students either before or after their graduation to meet the overall needs of the U.S. merchant marine. Any attempt to do so without appropriate authority is likely to have a negative impact.

Lastly, the MWWG reviewed the Coast Guard MMLD system, and its accessibility and value to the Maritime Administration. For the purposes of evaluating the pool of U.S. Citizen mariners, the working group found the MMLD to be lacking in ease of use and functionality to accurately estimate the available pool of credentialed mariners. The MMLD was designed for issuing mariner credentials which it accomplishes very eminently. The MARAD processed and analyzed MMLD data extracts received through a data sharing agreement with the USCG using its own Mariner Outreach Database System (MOS) until 2014. However, as a result of changes in MMLD data encoding practices at the USCG, the MOS has been unsuccessful in processing MMLD data since 2014. For the purpose of this Report, MWWG used the MMLD data in its raw form.

It is the unanimous opinion of the MWWG that the MMLD should be replaced with a modern database capable of supporting high analytics. However, the national security needs are current and ongoing, and MARAD is required to provide information on mariner availability to meet the national security needs contemporaneously. While analyzing the MMLD extracts as currently coded, MARAD found that continued use of its MOS system will require changes in MMLD data coding practices. Data analysis would also benefit from enhanced sea service visibility in the current system which it currently lacks. These interim changes would help resolve the ongoing inability to generate data on mariner availability until a new database is available. However, system-wide limitations may preclude USCG from making those changes. A larger U.S.-flag fleet, as well as increased training capability through commissioning new training ships for the maritime academies will also go a long way toward establishing an effective and dependable supply of qualified and willing mariners with the appropriate credentials and thus, a healthy U.S. Merchant Marine to meet the national security needs.



## INTRODUCTION

---

Section 3517 of the National Defense Authorization Act (NDAA) for Fiscal Year 2017, Pub. L. 113-328 tasked the Maritime Administrator to convene a Maritime Workforce Working Group (MWWG) “to examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency,” in consultation with the U.S. Coast Guard Merchant Marine Personnel Advisory Committee (MERPAC) and the Committee on the Marine Transportation Systems (CMTS). Accordingly, pursuant to authority delegated by the Secretary of Transportation (Secretary) to the Maritime Administrator (Administrator) and in accordance with the Federal Advisory Committee Act implementing regulations, MARAD established the MWWG subcommittee (Subcommittee or MWWG) of the U.S. Maritime Transportation System National Advisory Committee (Committee or MTSNAC). The subcommittee was charged to investigate and advise on the tasks posed by Congress within a year at which time its Charter as well as all MWWG member appointment terms would expire.

### The Subcommittee Charter

The Maritime Administration requests the **Maritime Workforce Working Group** to examine and assess the size of the pool of citizen mariners necessary to support the United States Flag Fleet in times of national emergency. The subcommittee will consider and provide recommendations on the following issues over the course of the Work Plan:

1. Identify the number of United States citizen mariners:
  - a. in total;
  - b. that have a valid Coast Guard merchant mariner credential with the necessary endorsements for service on unlimited tonnage vessels that are subject to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended;
  - c. that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;
  - d. that are available to crew the United States flag fleet and the surge sealift fleet in times of a national emergency;
  - e. that are full-time mariners;
  - f. that have sailed in the prior 18 months;
  - g. that are primarily operating in non- contiguous or coastwise trades; and
  - h. that are merchant mariner credentialed officers in the United States Navy Reserve;
2. Assess the impact on the United States merchant marine and United States Merchant Marine Academy if graduates from State maritime academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine;

3. Assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners; and
4. Make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners.

## BACKGROUND

The Ready Reserve Force (RRF) was established in 1976 to augment the nation's sealift in a timely and responsive manner. The activation of RRF ships during Operation Desert Shield/Storm gave the first opportunity to evaluate the program's readiness and operational effectiveness. Accordingly, a joint Department of Defense/Department of Transportation (DoD/DOT) Ready Reserve Force Working Group (RRFWG) was chartered in 1991 to evaluate the lessons learned from those activations and make recommendations for overall enhancement of the RRF program.<sup>1</sup> The Report documents a shortage of appropriately qualified senior marine engineers that delayed the activation of some RRF ships<sup>2</sup> as well as the declining trend in the number of civilian mariners during the preceding decade. At that time, MARAD estimated a pool of 11,000 mariners by the turn of the century owing to declining U.S.-flag fleet size and the increasing tendency toward reduced crew size on board ships.<sup>3</sup> This finding was one of the driving factors leading to the creation of the Maritime Security Program (MSP) in 1997. Among the challenges identified in 1991 were the gradual decrease in the number of steam-powered ships and mariners trained in operating steam power plants, as well as mariners with the skills to operate shipboard cargo handling gear.<sup>4</sup> The 48 RRF vessels together with 15 Military Sealift Command (MSC) Surge vessels combined to form the 63 ship Surge Sealift Fleet.

The surge sealift fleet performs delivery of military unit equipment and provides support functions to ensure that the logistics chain conveys the equipment and supplies for a major contingency. These ships arrive in the theatre of operations in surges, with preposition ships arriving first, followed by ships from ports in the United States and other parts of the world. The surge period varies by scenario, but may last up to 180 days. These ships may face difficult conditions, call underdeveloped ports, and in most likelihood, encounter damaged infrastructure, or possibly enemy action.

The 2004 Report to Congress titled Merchant Mariner Training to Meet Sealift Requirements<sup>5</sup> was an indirect follow up to the 1991 Report, and documents mariner data and related issues during the turn

---

<sup>1</sup> Joint Department of Defense/Department of Transportation Ready Reserve Force Working Group, "The Ready Reserve Force: Enhancing a National Asset," Oct. 1991. Hereafter referred to as the RRFWG Report.

<sup>2</sup> See RRFWG Report p. 6-11

<sup>3</sup> See RRFWG Report p. 1-8

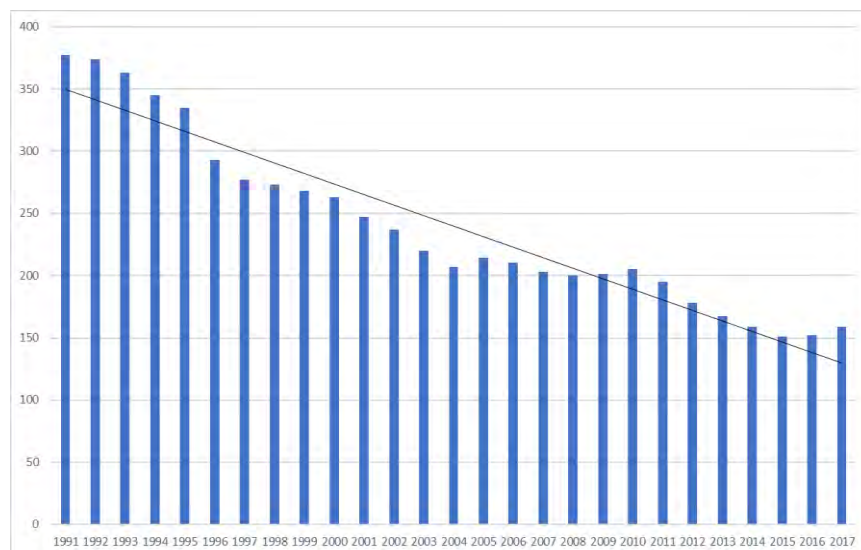
<sup>4</sup> See RRFWG Report p. 1-7

<sup>5</sup> U.S. Department of Transportation Maritime Administration, "Merchant Mariner Training to Meet Sealift Requirements", Aug. 2004. Hereafter referred to as MMT 2004 Report

of the century. It found approximately 16,000 fully-qualified U.S. mariners who could crew the government’s surge sealift fleet in 2004.<sup>6</sup> Although the decline in mariner numbers was not as precipitous as forecasted by the RRFWG Report, the drop from 25,000 qualified mariners in 1990 to 16,000 in 2004 was nonetheless highly significant.<sup>7</sup> The 2004 Report went on to predict a continuation of the declining trend driven by depleting U.S.-flag privately-owned fleet size; Figure 1 shows the continuing decline from 1991 until now.

The 2004 Report also documented the impact of the 1995 amendments to International Convention on the Standards of Training, Certification and Watchkeeping For Seafarers (STCW) on U.S. mariners of the training and certification requirements. Introduced by the International Maritime Organization (IMO), the STCW Convention came into force in 1978.<sup>8</sup> The United States became a party to the Convention in 1991. The 1995 amendments increased the training requirements and minimum proficiencies required to obtain and/or maintain mariner qualifications for all signatory members.

**Figure 1 – United States Flag Privately-Owned Merchant Fleet, 1991 – 2017. Self-Propelled, Cargo-Carrying Vessels of 10,000 Gross Tons and Above**



<sup>6</sup> See MMT 2004 Report p. i

<sup>7</sup> See RRFWG Report p. 1-7

<sup>8</sup> The STCW Convention was amended in 1995 and 2010.

## Surge Fleet Mariner Credential

United States Coast Guard credentials are typically valid for a 5-year period and include 63 National endorsement combinations of U.S. mariner credentials and 30 STCW International endorsement combinations. Deciphering the correct number of mariners with the appropriate credentials is a complicated task, and determining how many of them are willing to sail at any given time, given their volunteer status, is even more puzzling.

Question 3 of the NDAA tasking requires an assessment of the accessibility and value of the United States Coast Guard (USCG) database Merchant Mariner Licensing and Documentation system (MMLD) to MARAD for evaluating the pool of U.S. citizen mariners. The USCG developed the MMLD in the 1990s to issue mariner licenses and documents in a consistent and timely manner. It was not developed to quantify information on active, credentialed mariners available for national sealift purposes, and the ability to mine the MMLD for this type of information has always been limited. As the MMLD has grown and the types of credentials have changed and expanded through both regulatory changes and international requirements, the MMLD's limitations as a source of mariner statistics has been greatly amplified, particularly over the last decade. These limitations are discussed later in this report. Before a discussion of the use of MMLD data, however, it is first necessary to discuss the types of credentials it records.

### Merchant Mariner Credentials

The USCG is responsible for issuing all U.S. mariner credentials. Mariners earn many different types of merchant mariner credentials (MMC). These license and rating credentials with endorsements can be grouped by various criteria based on the type, size, and engine type of vessels, route, and for the duties and authorities of the mariner on a given vessel, i.e., license endorsements or rating endorsements. A discussion of these criteria follows next.

#### 1<sup>st</sup> Criterion: Shipboard Department

Mariner credentials are assigned in accordance with the shipboard department the mariner will work in. These include:

1. Deck Department – responsible for the navigation of the vessel, handling of cargo, and general maintenance of the vessel other than the engine room and shipboard machinery
2. Engine Department – responsible for operation and maintenance of the propulsion plant and shipboard machinery
3. Steward Department – responsible for hotel services on the vessel

4. Staff Officers – includes medical personnel and administrative support personnel (typically these mariners are not part of the crew on most commercial vessels).

## **2<sup>nd</sup> Criterion:**

Mariner endorsements are further assigned by level of responsibility and the scope of the level of authority associated with each credential. Generally, endorsements fall into three levels of authority:

1. The management level for a vessel's senior officers, i.e., the Master (Captain) and Chief Engineer and the officers next in seniority (Chief Mate/Second Mate and First Assistant Engineer/Second Engineer Officer) who would assume the duties of the Master or Chief Engineer in the event of incapacitation. It takes on average 10 years to become a Master or Chief Engineer.
2. The operational level for junior officers (Mates and Assistant Engineers)
3. The support level for non-officer mariners (referred to as unlicensed mariners or "ratings"). These are further divided into:
  - a. entry-level credentials and
  - b. those requiring qualification and experience

## **3<sup>rd</sup> Criterion:**

Officer endorsements are issued for vessels of specific sizes (measured in gross tons<sup>9</sup>) for deck officers, and by the type of propulsion machinery and its power output for engineers.

Deck officer credentials are issued in the following general tonnage (size of vessel) categories:

1. Less Than 200 Gross Register Tons (GRT)
2. Less Than 500 GRT
3. Less Than 1,600 GRT
4. Unlimited Tonnage

Deck officers without experience may have credentials issued on limited tonnage. Once the mariner has met the sea service requirement of at least 6 months' experience on vessels of 1,600 GRT or more or the calculated limitation equals or exceeds 10,000 GRT, s/he receives an "unlimited tonnage" credential. This means that mariner holds a credential that allows him/her to work on a vessel of any size, or stated another way, to work without "limitation" to vessel size.<sup>10</sup>

---

<sup>9</sup> Gross tonnage is a volumetric measure of the ship, where 100 cubic feet = 1 gross ton.

<sup>10</sup> See 46 CFR Subpart D 11.402

Engineer endorsements are for specific types of propulsion machinery, either steam-powered engines, motor (diesel) engines, or gas-turbine engines that follow propulsion power increments listed below. It is common for an engineer to have multiple endorsements for more than one type and/or power criteria of the propulsion plant:

1. Less Than 1,000 Horsepower (HP)
2. Less Than 4,000 HP
3. Unlimited HP

For vessels with HP over 4,000, mariners may be limited to the total engine HP propulsion they are credentialed to operate in 1,000 HP increments up to 10,000 HP (46 CFR Subpart E 11.503). Once the mariner provides evidence of at least 6 months' experience on vessels of 4,000 HP or greater, or the calculated limitation equals or exceeds 10,000 HP or larger, they receive an "unlimited horsepower" credential.

#### **4<sup>th</sup> Criterion**

Deck officer credentials are valid for work on specific waterways or "routes", and with one exception, follow a hierarchy in which the "higher" credential is also valid for all "lesser" waterways. The general rank order of deck officer endorsements based on the type of routes is:

1. Oceans
2. Near-Coastal (up to 200 miles offshore)
3. Great Lakes
4. Inland waterways
5. Rivers

#### **"Other" or Specialized Criteria**

Pilot – In addition to the above, USCG also issues endorsements for First Class Pilots for specific waterways. First Class Pilots are mariners who will serve as navigational advisors on vessels navigating where specialized "local knowledge" is needed for the vessel to transit the waterway safely.

Restricted Waterways - USCG may also issue endorsements which limit mariners to vessels working on a specific waterway with unique operational needs for which the "normal" requirements of an officer endorsement are not applicable. These are typically issued for deck officers on small vessels operating exclusively on unique inland waterways without substantial commercial traffic.

National vs. International Service - Mariners who operate exclusively in US domestic waters are only required to hold "national" endorsements. Mariners serving on vessels on international voyages, other than voyages to Canada, must also hold an internationally recognized credential issued in accordance with the STCW Convention as amended.

Vessel Type/Installed Equipment - USCG issues endorsements for mariners working on vessels which perform specific functions like towing vessels and oil, chemical, and Liquefied Natural Gas (LNG) tankers all of which require individualized endorsements. Specific credentials may also be required for deck officers on vessels with specialized navigational and safety equipment such as radar and automatic radar plotting aids (ARPA), electronic chart display information systems (ECDIS), or communication and distress alert equipment for the global maritime distress and safety system (GMDSS).

One additional factor influencing the pool of qualified mariners is the precipitous decline in the use of steam-powered vessels. Of the 63 organic surge sealift vessels, 24 use steam propulsion.<sup>11</sup> However, the U.S.-flag commercial fleet currently consists of only 12 actively trading steamships, which is inadequate to produce additional appropriately-qualified steam engineers to support the organic surge fleet. It is expected that by end 2020, these 12 steamships will be replaced by motor vessels. The low commercial steamship count means the industry is very limited in its ability to upgrade engineers above the entry-level steam endorsement (or Third Assistant Engineer Steam) which would only worsen once the existing steam ships are deactivated.

Minimum Safe Manning - Every U.S.-flag vessel included in this study must possess a current Certificate of Inspection (COI) issued by the USCG. The contents of the COI include minimum safe manning for moving a given ship from point to point. A ship may surpass the COI manning level but not fail to meet that vital minimum requirement. It is also noteworthy that mariners holding a superior endorsement may sail in all capacities that are inferior to their endorsement (subject to propulsion mode limitations). For example, a Second Assistant Engineer of Motor Vessels may also sail as a Third Assistant Engineer on a motor vessel, and a Chief Mate may sail as Second Mate or Third Mate.

Credentials Needed to Work on Surge Sealift Vessels - The types of credential mariners must possess to work on an organic<sup>12</sup> surge fleet vessel is one that is not limited by tonnage, horsepower, vessel type or water. Accordingly, the surge fleet requires a fully qualified mariner, commonly referred to as a mariner with unlimited credentials, (and when applicable, which allows for work on steam powered engines of any size). The mariners must also meet all the requirements of STCW because the surge sealift vessels are most likely to call foreign ports, where mariner STCW compliance is enforced.

### **Medical Certificate**

In addition to being qualified to meet the national and international credentialing requirements, all officers and qualified [unlicensed] ratings must be medically and physically qualified to sail with their credential. Upon demonstrating that they are qualified, USCG issues Medical Certificates for service on board vessels. Medical Certificates have a 2-year validity for those holding STCW endorsements or first-class pilot, and 5-year validity for national endorsements.

---

<sup>11</sup> The term “organic” refers to government owned and operated sealift vessels.

<sup>12</sup> The term “organic” refers to government owned and operated sealift vessels.

The standards for merchant mariner medical certification are contained in 46 CFR, Part 10 subpart C. The standards include requirements for vision, hearing, general medical examination, and demonstration of physical ability and are listed below:

1. Vision Requirements as stated in 46 CFR 10.305.
2. Hearing Requirements as stated in 46 CFR 10.306.
3. General Medical Examination: Title 46 CFR 10.304 requires that the general medical exam be documented and of sufficient scope to ensure that the applicant has no conditions that pose a significant risk of sudden incapacitation or debilitating complication. The regulation also requires documentation of any conditions requiring medications that impair cognitive ability, judgment or reaction time.
4. Physical Abilities: The duties and responsibilities that a mariner may perform on board a ship can vary widely by the credential earned. Mariners should be physically capable of performing all potential duties, both routine and emergency, associated with their credential(s). The median age for USCG credentialed merchant mariners is 46 years old, compared to a median age of 42 for all U.S. workers and 43 for all transportation and material moving occupations.<sup>13</sup>

In summary, for mariners to sail on a vessel, they must be able to demonstrate, and the vessel operator should ensure, their holding a valid Medical Certificate.

### **Transportation Worker Identification Card (TWIC)**

In addition to national and international credentialing requirements, all credentialed mariners included in this analysis must possess a valid Transportation Worker Identification Credential (TWIC). The U.S. Code at 46 U.S.C. 70105 requires that individuals issued a license, certificate of registry, or merchant mariner document must possess a biometric identity card issued by the Department of Homeland Security. This requirement is applicable to those mariners serving on board the surge sealift ships. A TWIC is not issued if the mariner poses a security risk.

### **Security Clearance**

At times and in accordance with the mission performed by sealift vessels supporting DoD and the contingency involved, it may be necessary for mariners to possess the appropriate level of security clearance. Current industry experience places the time required for interim clearances at approximately 4 months and full clearances at about 2 years from the day investigation starts.

---

<sup>13</sup> MMLD data analysis and Department of Labor, Bureau of Labor Statistics, Household Data Annual Averages, 11b. Employed persons by detailed occupation and age, 2016 data.



In summary, a fully qualified mariner for the surge fleet is one who holds:

- A current and valid unlimited tonnage or unlimited horse power oceans license without limitations and meets the required STCW standards
- A current and valid Transportation Worker Identification Credential (TWIC)
- A current and valid USCG STCW Medical Certificate
- A current and valid security clearance if required

The USCG provided data that represents the number of mariners holding valid credentials per the first two bullets above. Information is also included on the STCW Medical Certificate. No information, however, is included concerning mariner security clearances. Note that the total number of mariners provided by the USCG under FINDINGS D (1)<sup>14</sup> represent the number of mariners according to their highest held endorsement, even when they sail in a lower capacity.

## Civil Service Mariners Employed by Military Sealift Command

The Navy Civil Service Mariner (CIVMAR) community constitutes a significant component of the qualified mariner pool and is routinely involved in crewing ships operated by the Military Sealift Command (MSC). CIVMARs are Federal Government employees. The following is a synopsis of the CIVMAR community and its size, as well as a broader description of the MSC fleet, and its capabilities and mission.

CIVMARs are trained to USCG standards and receive USCG credentials and are recorded in the MMLD in the same way as any other mariner. In addition, they also receive Navy-specific training necessary to operate MSC vessels during both war and peace. The length of the required training varies depending on the individual's responsibility or position on board the ship and the ship type.

CIVMARs are normally assigned to a ship for a minimum of four months at a time, after which the mariner may request a relief prior to taking earned leave. Although MSC attempts to relieve them on the date requested, if a relief is not readily available, a mariner may be required to remain with the ship until the replacement arrives. During periods of extended contingency operations, it may be necessary for mariners to remain with their vessel for periods longer than four months.

For every shipboard position, MSC employs 1.22 CIVMARs to allow for leave rotations, shore-based training, disciplinary action, and emergent requirements that address peculiarities with:

- 1) T-AH (Hospital Ships) Reduced Operational Status 5-day activation;
- 2) EPF Class - High Speed Craft Type Rating training and certification; and

---

<sup>14</sup> Appendix F.

3) T- AKE/T-AO (Dry Cargo/Ammunition and Fleet Replenishment Oiler) station ship surge capability. The requirement for CIVMARs varies from year to year depending on variables such as the number of ships in operation.

The MSC pipeline is relatively lean compared to the private sector primarily because CIVMAR leave is limited by statute to one to two months a year depending on years of service. In an emergency, MSC can cancel or delay CIVMAR leave, recall CIVMARs from leave, cancel non-essential training and use part of this pipeline for emergent requirements.

The U.S.-flag commercial merchant fleet and the government-owned RRF and MSC ships constitute the nation's sealift capability. Over 90 percent of U.S. military equipment and supplies travel by sea. MSC's mission is to support the joint warfighter across the full spectrum of military operations. It provides logistics, strategic sealift, as well as specialized missions, operating about 115 ships daily around the world. The MSC fleet--a mix of 124 government-owned and chartered vessels--is divided into eight programs as follows:<sup>15</sup>

- PM1 - Fleet Oiler (15 ships)
- PM2 - Special Mission (24 ships)
- PM3 - Prepositioning (27 ships)
- PM4 - Service Support (9 ships)
- PM5 - Sealift (23 ships, of 15 are surge ships)
- PM6 - Fleet Ordnance and Dry Cargo (14 ships)
- PM7 - Afloat Staging I Command Support (4 ships)
- PM8 - Expeditionary Fast Transport (8 ships)

Approximately 53 of the MSC ships are operated by CIVMARs, with the balance of the MSC owned or chartered vessels operated by private citizen U.S. mariners contracted through labor unions (referred to as CONMARs). Majority of these 53 vessels are naval auxiliaries operated either solely by CIVMARs or by hybrid crews consisting of both military personnel and CIVMARs.<sup>16</sup> MSC employs 5,576 full-time CIVMARs for the government-operated vessels.

---

<sup>15</sup> For more information about these vessels, see U.S. Navy, Military Sealift Command, Ship Inventory, <http://www.msc.navy.mil/inventory/>

<sup>16</sup> Many MSC ships, including all 15 fleet oilers, have military personnel in their crews.

### **Credentials and Training**

All MSC CIVMAR officers hold credentials to sail on vessels of any tonnage and horsepower. However, serving on some vessels will require specialized qualifications such as:

- High Speed Craft Type-Rating - T-EPF
- Towing Endorsement - T-ATF and T-ARS
- Steam License - T-AH, AS, LCC and AFSB(I)
- Gas Turbine License - T-AOE and T-AKR
- Tankerman DL (dangerous liquids) Endorsement - T-AO, T-AOE and T-AKE

## Force Projection Assumption

The ability of the U.S. Transportation Command (USTRANSCOM) to meet combat force projection mobility requirements is measured against the most demanding wartime scenario. This scenario calls for activation of the entire 48-vessel Ready Reserve Force and 15-vessel MSC Surge fleet to provide the organic surge sealift capacity required to meet the supported commander's operational timeline. It is anticipated that the surge timeframe for the most demanding activation scenario will require crew rotations that would significantly challenge the ability of labor unions to supply mariners to both the activated RRF and MSC Surge fleet as well as the U.S. commercial fleet simultaneously. Typical crew rotations for mariners on board commercial ships are between 90 and 120 days, followed by a comparable amount of time on shore. However, full surge sealift activation would require many of these mariners to report to sail on organic surge sealift vessels prior to the expiration of their time ashore. Additionally, mariners volunteering to sail during a full RRF/MSC activation, whether on organic sealift or commercial vessels, may have to endure prolonged assignments or tours of duty until the emergency is over.

## The Working Group

The MWWG was established to address the tasking required by the FY2017 NDAA. Congress tasked the Maritime Administrator to convene the Working Group and assess the pool of U.S. citizen mariners necessary to support the U.S.-flag fleet in times of national emergency in consultation with the USCG's MERPAC and the CMTS.

The MWWG was constituted as a subcommittee of the MTSNAC. MWWG is established pursuant to the Federal Advisory Committee Act (FACA) with a membership of 25 stakeholders whom represent 22 subcommittee member organizations. As specified in the FY2017 NDAA, the member organizations include MARAD as chairperson, MERPAC, CMTS, the USCG, the U.S. Navy, MSC (a component of the U.S. Navy and USTRANSCOM), U.S.-flag fleet vessel owners and non-profit labor organizations representing the U.S.-flag fleet, the U.S. Merchant Marine Academy (USMMA) and the six State Maritime Academies.<sup>17</sup> Three organizations were also brought in as subject matter experts (SMEs); those being representatives from USTRANSCOM, DoD, and the U.S. Army.

As the MWWG progressed it became evident that it would benefit from leaders from other areas of the industry that employ mariners, including the oil and offshore industries as well as the smaller maritime labor unions. Accordingly, additional stakeholders were offered membership or SME spots on the

---

<sup>17</sup> The six state maritime academies are: California Maritime Academy, Great Lakes Maritime Academy, Maine Maritime Academy, Massachusetts Maritime Academy, SUNY Maritime College, Texas A&M Maritime Academy

subcommittee to broaden the representation within the MWWG and facilitate wider dialog. This led to a final stakeholder membership of 26 Members and five SMEs. Although all SMEs were willing to provide background information, much was provided off the record. Among the four additional SMEs approached, only two accepted the formal invitation to participate in the MWWG.

The MWWG began with an administrative meeting in March 2017 during which all participants were introduced and the FACA protocol highlighted. The first order of business included establishing a set of common terms, referred to as “terms of reference” to be used by stakeholders for subsequent discussions and in responding to the tasking from Congress. The intention was to come to a consensus on topics ranging from the definition of a mariner for the purposes of this Report and which mariners are qualified to support the U.S.-flag fleet in times of national emergency. The adoption of this base set of definitions and assumptions was fundamental in providing consistent and logical responses to the NDAA tasking. This effort focused on thirteen specific terms used in the statute for which clarification would help the MWWG address the concerns of Congress including questions such as:

- Who is a U.S. citizen mariner?
- What are the industry standards and typical crewing practices?
- What are the necessary USCG qualifications for a mariner who would sail on ships activated during a national emergency?
- What additional caveats would limit qualification, including medical requirements and specialized DoD requirements where applicable?
- What would be a reasonable approach in estimating the “availability” of mariners given the voluntary nature of their service in general?

The discussions during the first MWWG meeting also included brainstorming on the study methodology and how members could contribute to this Report. The various methods to derive mariner numbers used by different stakeholders were briefly discussed as well as the challenges in extracting (“mining”) information from mariner data available in the USCG MMLD. The methods are listed later in this Report along with detailed discussions about their limitations for data analytics.

The MWWG held its next meeting in April during which the terms of reference for use in this report were further refined through extensive dialog and discussions. Further, the working group also began addressing the first two deliberative assignments tasked by the 2017 NDAA §3517 statute through two separate breakout groups. One group of stakeholders addressed issues related to the MMLD such as its accessibility and value to MARAD for purposes of evaluating the pool of mariners, and the other group addressed the impact on the U.S. Merchant Marine, USMMA, and also the State Maritime Academies if the graduates of those academies were assigned to, or required to, fill certain maritime positions based on the overall needs of the U.S. Merchant Marine.

During the May MWWG meeting, the group completed its discussions on the terms of reference. A Congressional staff member provided guidance on congressional intent in relation to some of the questions posed through the NDAA tasking. The agreed terms of reference are included in Appendix

(C). During the meeting, a request was made to key stakeholders including the USCG, labor unions, MSC, DoD, USTRANSCOM, and the U.S. Navy to respond to specific aspects of the tasking that fell directly under their operational responsibilities. The first round of inputs was received in late June, and all the contents received are integrated within this Report.

In early July, MARAD issued a Federal Register Notice announcing a public docket to solicit comments from the public at large, specifically segments of the industry and/or interested individuals who may have had no other opportunity to provide comments to the questions on mariner pool raised by Congress. Docket No. MARAD 2017–0117 opened on July 11 and closed on July 31, 2017. During this open period, the docket received a total of 13 comments from the industry, labor, and the public. Twelve of the comments were substantive and are included in this report. All inputs received from stakeholders and via the docket can be seen in Appendix (E – W) of this report.

In August, the MWWG held its last face-to-face meeting. During this meeting a preliminary draft Report outline with inputs received from some stakeholders was distributed for comments and review. USCG, MSC, and various offices of DoD submitted comments which were promptly incorporated into this Report.

## Methodology

### Estimating the “Available” Qualified Mariner Pool using MMLD Database

The only comprehensive source for generating statistics of the total pool of U.S. mariners with USCG credentials of any category is the USCG MMLD system.<sup>18</sup> The system was built on 1991 architecture and is currently in serious need for advancements to enable better data analytics. Its primary objective when built was to issue mariner licenses and documents (and now, credentials). While the MMLD is very efficient in meeting its core function of issuing the credentials, it supports limited data mining in general and has severe limitations in responding to queries such as those posed to MWWG through the FY2017 NDAA. These limitations have become more severe over the last decade due to changes in the way credentials and limitations are recorded in the MMLD, particularly since 2009.

The MWWG found various examples of the complexity of the data mining using the MMLD. A review of MMLD data provided by USCG on marine engineers with unlimited credentials show 6,580 with Motor (diesel) endorsement, 3,024 with Steam endorsement, and 3,115 with Gas Turbine endorsement. However, a simple addition of these numbers would be erroneous because many marine engineers have comparable endorsements for all three propulsion systems. Double and triple counting of this type can be corrected, however, in the query process. Another example of the complexity of the MMLD pertains

---

<sup>18</sup> Labor unions maintain current records on their members, and MSC and the U.S. Army maintain information on their CIVMARS. Also, individual vessel operating companies keep some records on personnel employed by them. The MMLD, however, is the only source that maintains comprehensive records on all mariners receiving USCG credentials.

to the number of mariners reported out of it. The number of Deck Ratings with unlimited credentials which the database reports, for instance, is over 13,500. However, the maritime labor unions, which represent mariners on 158 of the 176 commercial ships and all the government-owned ships and are contractually committed to crewing the surge fleet, report a cumulative membership base consisting of Deck, Engine, and Catering Ratings of only about 6,000. There are various possible explanations for this discrepancy, including that the USCG count may include the following mariners: holders of unlimited ratings who have not recently sailed; non-union mariners sailing on near-coastal (e.g., offshore supply vessels) or Great Lakes or inland waterways vessels; and mariners working ashore.<sup>19</sup> There is, however, no ready avenue for MARAD to verify or quantify the impacts of these possible causes regarding the 6,500 Deck, Engine, and Catering Ratings listed in the MMLD but are not members of the labor unions. When available, sea service records for individual mariners listed in the MMLD are helpful for this purpose, but unfortunately such records are not recorded in the MMLD for many mariners.

The MWWG acknowledges that the MMLD database as currently structured is not effective for responding to questions such as the pool of qualified mariners available to crew the sealift fleet. Therefore, making such assumptions and drawing conclusions based solely on the number of credentials issued, for the purpose of this report, is erroneous for the following reasons:

- MMLD does not consistently, nor was it designed to track what a mariner does with his/her credential once it is issued (unless complete sea service records are available)
- Mariners may renew their credential/endorsement without recent sea experience by taking exams or courses
- MMLD does not track mariners with unlimited credentials who pursue other careers, e.g., those employed on board offshore supply boats, employed ashore, etc., although in some cases sea service records (when available) may indicate sea service on smaller vessels
- MMLD does not track deceased or incapacitated mariners unless the mariners report such incapacitation and/or if they fail to renew their Medical Certificates
- Sea service data are often not recorded in the MMLD
- The fact that a mariner is listed as holding current credentials in the MMLD does not imply that the mariner is available or willing to sail in a national emergency

Further complicating the use of the MMLD for quantifying the pool of mariners qualified to work on surge sealift is a recent change in MMLD data coding practices. Prior to 2014, USCG personnel coded information on mariner credentials into specialized fields within the database. In the previous decade, MARAD had developed its Mariner Outreach System (MOS) in cooperation with USCG to process data from these specialized fields in MMLD to count mariners with credentials unlimited by tonnage,

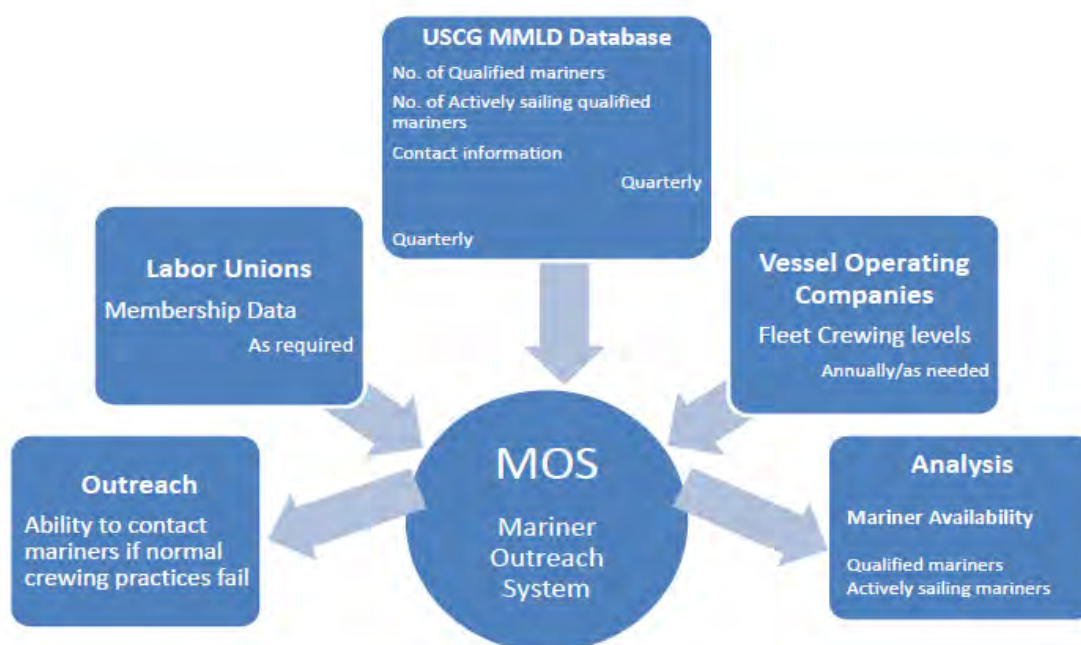
---

<sup>19</sup> Processing STCW data recorded in the MMLD is very difficult. For the MWWG exercise, USCG assumed that all mariners with a STCW Medical Certificate met all STCW mariner requirements.

horsepower, vessel type, or body of water (MOS uses data from other sources to supplement the findings from MMLD).

The main purpose of MOS is to monitor the U.S.-flag fleet and ensure that there are sufficient sealift capabilities in a time of national emergency or sealift crisis. To achieve this, MOS generates reports based on a combination of the vessel requirements (mariner demand) and the USCG MMLD data (mariner supply). It provides a systematic way to monitor the adequacy of the nation's mariner pool and when possible maintain contact information and qualifications of mariners who participate in the system. It is a crucial tool for MARAD and its federal partners in projecting mariner availability, identifying potential mariner shortfalls, and strategizing crewing options if and when such shortages occur. Figure 2 depicts the information flow to and from the MOS system. It is updated mainly with data from the MMLD along with those received from vessel owners and operating companies and labor unions. Additionally, MOS provides functionality which allows mariners, via its portal, to consent to be contacted in the event of a national emergency and to enable them to provide updated contact information since the information in the MMLD database could be as old as five years. In return, MARAD allows mariners access to the system and review their sea service (if available) and credential information.

**Figure 2. Mariner Availability Tracking**



After March 2014, in order to support the new regulations published on 24 December 2014, USCG ceased encoding mariner credential data in specialized fields for each mariner and instead recorded this information exclusively as free text within the database. This change effectively disabled the interface between the MOS (which relied on the encoded fields to identify mariner limitations) and the MMLD. Subsequently, MARAD has been unable to process MMLD data in the MOS.



For the WMMG exercise, the USCG developed an alternative means to query the MMLD for unlimited credential mariners. This approach searches for key words indicating unlimited credentials within the free text fields of the MMLD as well as the mariner possessing a current STCW Medical Certificate.

Additionally, the USCG provided MARAD with the raw data (as part of the ongoing data sharing agreement) that allowed MARAD data specialists and economists to perform parallel analysis using relevant methods and statistical techniques. The purpose for providing these data was to replicate the MMLD query at MARAD and validate the mariner numbers reported by USCG. MARAD conducted a detailed review of the USCG finding of 2,466 unlimited oceans masters (a manageable subset of the 33,215 unlimited mariners identified by USCG) and found that one in ten of these masters appeared to have restrictions that would cause them not to qualify as unlimited. Additionally, sea service data, which was available for 53 percent of qualifying masters, allowed MARAD to confirm that 767 of the unlimited ocean masters identified in the USCG query had sailed within the last 18 months (one of the conditions required under 2017 NDAA §3517). The actual number with recent sea service in the last 18 months is certainly higher, but MARAD did not have information to determine by how much (see Appendix D for a summary of this analysis). Also, except to confirm that the masters had STCW Medical Certificates, MARAD could not confirm that the masters identified in the query met all STCW requirements.

### **MARAD Methodology for Estimating the Available Qualified Mariner Pool**

MARAD receives the MMLD database raw data in the form of extracts on a quarterly basis per the provisions of its MOU with the USCG, executed most recently on November 29, 2016. These extracts were used in the past to populate the MOS.<sup>20</sup> MARAD must reconfigure and reprogram the MOS whenever changes are made within the MMLD system. However, the most recent changes to the MMLD, beginning in March 2014, included a fundamental shift in the way data is entered in the MMLD. Prior to June 2017, MARAD was unable to accommodate the changed MMLD data protocols in the MOS but is currently making good progress in doing so, largely because of information learned through the MWWG exercise.

Once the MOS is fully re-integrated with the MMLD, it will still be subject to the same limited data mining capability discussed earlier for the MMLD. As noted in Figure 2, MOS corroborates data it extracts from the MMLD with information about mariners from labor unions, mariner outreach, and vessel operating companies. U.S.-flag vessel operating companies provide MARAD with data on the number of ships owned that employ mariners with unlimited credentials and the number of billets (crew positions) on those ships. Labor unions that have collective bargaining agreements with the employers provide MARAD with membership data.

---

<sup>20</sup> Owing to changes in the USCG data entry process—switching over from the old practice of entering a code for each designated endorsement to making free text entries—MARAD has been unable to populate the MOS database with any level of accuracy from the 1<sup>st</sup> quarter of 2014.

Given the current inability of the MOS system to calculate the relevant number of available mariners with unlimited credentials from the MMLD, MARAD's practical approach to estimating the subset of unlimited mariners is based on the size of the current U.S.-flag fleet of large self-propelled merchant-type vessels that require non-CIVMAR mariners or commercial mariners (CONMARs) (gleaned from the operating companies, USCG, and commercial data sources) with unlimited credentials, multiplied by the mariners needed to operate the ships over the course of a year (usually the number of billets for all qualifying vessels multiplied by 2 full-time mariners per billet), and supplemented by the number of CIVMARs that MSC reports are under its employment. MARAD believes that mariners in this pool by definition have current unlimited credentials and have maintained their proficiency by sailing on board large oceangoing ships during the last 18 months. STCW compliance is assumed for those mariners on internationally trading vessels because otherwise they would be unable to sail. Historically, CONMARs belong to labor unions and those entities have consistently mustered them to crew the surge sealift fleet in recent times of contingency—thus, these mariners are also assumed to be available and willing to sail. Willingness to sail, however, is difficult to confirm and may depend on the specific emergency scenario, including expectations of potential casualties.

#### **MWWG Methodology for Estimating Actively Sailing Mariners with Unlimited Credentials**

Because the USCG MMLD database cannot be queried to respond to questions beyond a historical count of unlimited credentials issued during the most recent five-year window, the MWWG has come to a consensus among stakeholders on a workable methodology that can serve the nation's needs until a more versatile mariner database, with robust datamining capability, becomes available. This interim methodology is based on the current MARAD methodology, but with enhancements. It consists of counting the number of mariners employed to operate the current fleet of large, self-propelled merchant-type ships that have characteristics comparable to those of the organic surge sealift fleet. These organic vessels generally consist of large oceangoing vessels that are 10,000 GRT or larger in size and with engine capabilities of 10,000 HP or higher. In addition to the larger vessels of the commercial fleet, there are some known smaller vessels that have historically employed mariners holding unlimited ocean credentials. As of June 2017, a total of 176 commercially-owned oceangoing merchant-type vessels constitute the source of such mariner employment. These vessels include MSP vessels, large Jones Act domestic trade ships, and U.S.-flag foreign trade vessels not in the MSP. Of these vessels, 99 are in the Voluntary Intermodal Sealift Agreement (VISA) program. MSC vessels outside of the CIVMAR-employed category, which include some that are on long-term charter and some government-owned contractor-operated (CONMAR-manned) vessels along with the RRF permanent crew portion of the surge sealift fleet.<sup>21</sup>

---

<sup>21</sup> The RRF is composed of government-owned vessels with contractor crews (CONMAR manned).

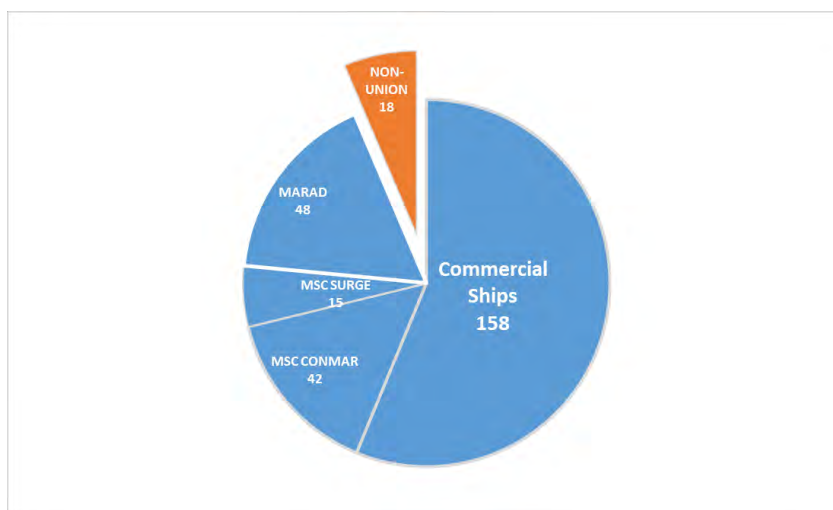
The number of actively sailing mariners is calculated by taking the total number of billets on board these vessels and multiplying that number by the crewing ratio of two (i.e., two mariners per billet on board each vessel) for all ships other than the RRF. The RRF manning requirement is calculated by a ratio of one mariner per ROS billet. The MWWG considers the resulting number of mariners as constituting the pool of mariners available to crew both the U.S.-flag commercial fleet and the surge sealift fleet in times of a national emergency.

**Table 1. MWWG Estimation of Actively Sailing CONMARs with Unlimited Credentials\***

	Ships	Billets	Mariners*
Commercially Owned Coastwise/Oceangoing Fleet**	176	4549	9,098
Military Sealift Command (MSC) Fleet ( <b>non-CIVMAR SHIPS</b> )**			
Government Owned	32	842	1,684
<b>Commercially Owned</b>	10	180	360
Reduced Operating Status (ROS) Maintenance Crews for RRF Vessels***	63	623	626
<b>Total Supply of Actively Sailing Mariners with Unlimited Credentials</b>			11,768
Notes:			
* Crewing ratio of 2 mariners per billet for commercially operated & MSC fleets and 1 mariner per billet for ROS (surge) fleet			
** 218 Active commercially owned and non-CIVMAR MSC vessels with full crew = 5,571 billets crewed by CONMARs			
*** ROS crew at minimum level to maintain vessel readiness			

As part of the working group collaboration with the labor unions and industry, the number of actively sailing mariners presented in Table 1 was cross checked and validated. The MWWG received information on qualified mariners from six stakeholder labor unions, which is shown in Table 2. Labor unions are responsible for crewing 94% of the 281 commercial vessels considered in this report, and 18 ships constituting 6 percent of the fleet have non-union crew.

**Figure 3. Crewing Distribution between Union and Non-Union Labor**



Additionally, MARAD reached out to the major non-union vessel operating companies for information on the number of mariners employed on board their ships. This outreach revealed another 500 mariners who are actively sailing with unlimited oceans credentials. The combined union and non-union reported workforce is listed in Table 2. These numbers are very close to those estimated in Table 1, although this is largely due to the pervasive representation by unions of mariners on the types of commercial vessels deemed comparable to government sealift assets.

**Table 2. Mariners with Unlimited Credentials, Union and Non-Union**

	Officers	Ratings	Total
Union	5,116	6,000	11,116
Non-Union <sup>22</sup>	200	300	500
Total	5,316	6,300	11,616

As noted earlier in this report, an additional 5,576 full-time CIVMARs are employed by MSC to crew the government-owned and -operated vessels. However, the CIVMARS are fully committed to government-owned vessels that would also be activated in most situations when the sealift fleet is activated and hence, unavailable to crew surge sealift assets.

The maritime industry operates in a challenging commercial environment and the number of CONMARs sailing at any given time is not static. Additionally, the mariner counts shown in Tables 1 and 2 are much less than totals revealed by the USCG's query of mariners currently holding unlimited oceans credentials (calculated at 33,215—see Findings in next section). The USCG count includes CIVMARs and almost certainly includes inactive mariners (i.e., those mariners who have not sailed in the last 18 months), mariners who have not recently sailed on large oceangoing vessels, those without full STCW credentials, and incorrectly selected mariners. Regardless, the disparity between the mariners identified by the MWWG in Tables 1 and 2 and the USCG's number of unlimited credentials issued will remain unresolved until more research is completed.

In summary, the MWWG believes that a reliable estimate of the subset of mariners actively sailing under the authority of their unlimited credentials (excluding the MSC CIVMARs) is an estimated 11,768. These are individuals with recent sailing experience, which a majority of the MWWG interprets unanimously as having sailed within the preceding 18 months. Their credentials are current, and they attend required refresher courses to maintain their endorsements as well as their competency. In addition, a large majority of them are affiliated with labor unions that have collective bargaining agreements with the companies that have the contracts to crew the surge sealift fleet. These U.S. mariners constitute the pool of dedicated professionals who have responded positively to the nation's need for sealift capability and force projection during national emergencies. However, while their availability and ability to sail on the surge sealift ships can be verified, their willingness to do so is beyond prediction. This is because, as civilians, mariners' services at any time are voluntary by nature; they have no obligation to report when called. Improved outreach to mariners to verify willingness to sail through regular surveys of the mariner base would help to resolve this important uncertainty.

### **Mariner Demand Estimation under Normal and Surge Activation/Sustainment Conditions**

The MWWG estimates a total supply of 11,768 qualified mariners with unlimited credentials are available to crew the ready reserve, MSC CONMAR, and commercial U.S.-flag fleets (see Table 1). Upon initial activation of the surge sealift fleet, the vessels in Reduced Operating (ROS) Status augment to the

---

<sup>22</sup> Non-union mariner numbers represent those with unlimited credentials employed by three major non-union ship operating companies that operate 18 ships.

Full Operating (FOS) Status. This requires an addition of 1,303 mariners to the initial 626 full-time maintenance crew on board those ships.<sup>23</sup> Thus, a total of 1,929 mariners are on board the surge sealift fleet when fully activated. At that point, MARAD estimates show a total of 7,500 mariners with unlimited credentials being at sea to crew the entire fleet<sup>24</sup> which is equivalent to the number of billets on board the consolidated fleet of 281 vessels (see Table 3).

However, once the surge fleet is activated, the identified pool of mariners ashore who are available to replace the 7,500 at sea drops to 4,268. The labor unions that supply these mariners have acknowledged that under such conditions, crew rotations will not be cycles of two months on-two months off or three months on-three months off for aggregate six months on-six months off work year (i.e., the two mariners per billet) model. On the contrary, they will resort to a longer six to nine-month work year model that implies three months on-two months off, approximating a crewing ratio of 1.75 mariners per billet from the very start of surge ship activation. Table 3 shows a total demand for 11,678 qualified mariners at the crewing ratio of 1.75 mariners per billet for the Commercially Owned (CO) and the MSC CONMAR Fleet along with the initial complement of 1,929 mariners required to activate the surge fleet. Under this model, concurrent operations of the commercial fleet and sustained surge sealift that demands crew rotation will require a total of 13,607 mariners with unlimited credentials. The model assumes that all identified mariners with unlimited credentials are willing to sail when activated.

**Table 3. Estimation of Demand for Mariners Under Surge Fleet FOS (Full Operating Status) Conditions for Initial Activation and Sustained Surge**

Category	Ships	Billets	Mariners**	Mariners***
			INITIAL ACTIVATION	SUSTAINMENT
<b>Commercially Owned (CO) Coastwise and Oceangoing Fleet</b>	176	4,549	7,960	7,960
<b>MSC CONMAR Fleet</b>	42	1,022	1,789	1,789
<b>CO and MSC Demand for Mariners</b>			9,749	9,749
<b>Sealift Fleet</b>				
<b>Full Operating Status (FOS) Crew Demand*</b>	63	1,929	1,929	3,858
<b>Total Number of Ships and Billets</b>	281	7,500		
<b>CO, MSC &amp; FOS DEMAND FOR MARINERS</b>			11,678	13,607
<b>ESTIMATED SUPPLY OF AVAILABLE MARINERS</b>			11,768	11,768
<b>STATUS</b>			SUFFICIENT	INSUFFICIENT
Notes: *Vessel fully crewed to meet current USCG requirements, and for mission accomplishment				

<sup>23</sup> The additional 1,303 mariners required to activate the surge fleet represent approximately 23% of the pool of identified available mariners with unlimited credentials who are ashore on vacation or for other purposes.

<sup>24</sup> The entire CONMAR-manned fleet includes 218 commercial and non-CIVMAR MSC ships, 46 RRF vessels, 15 MSC surge vessels, and 2 MARAD special mission vessels.

\*\*Crewing ratio of 1.75 mariners/billet for CO & MSC fleets, and 1/billet for the ROS Fleet INITIAL Activation\*\*\*  
Crewing ratio of 1.75 mariners/billet for CO & MSC fleets, and 2/billet for the FOS Fleet Sustained Surge Operations

## FINDINGS: §3517 D (1)

---

### *(1) Identify the number of United States citizen mariners—*

A U.S. citizen mariner is anyone who holds a valid USCG MMC and allowed to sail lawfully on a documented vessel per 46 USC 8103 (Appendix B). 46 USC 8103 authorizes USCG to issue MMC to unlicensed seamen who are an “...alien lawfully admitted to the United States for permanent residence”. These individuals are issued USCG credentials and currently sail aboard U.S.-flag vessels as common practice and hence, comprise a valid subset of the U.S. mariner pool with rating endorsements.

A fully qualified mariner for the surge fleet is one who holds:

- A current and valid unlimited tonnage or unlimited horse power oceans license without limitations and meets the required STCW standards
- A current and valid Transportation Worker Identification Credential (TWIC)
- A current and valid USCG STCW Medical Certificate
- A current and valid security clearance if required.

### *(a) The number of United States citizen mariners in total:*

As of July 18, 2017, the USCG MMLD database shows the issuance of a total of 208,718 current national and STCW MMCs.<sup>25</sup> Mariners in this group include both officers and unlicensed ratings. Their endorsements comprise a wide category of vessel types and sizes, from the very small to the unlimited range.

Approximately 90,000 of the total mariners listed above hold endorsements authorizing service only on Uninspected Passenger Vessels (OUPVs), inspected under Subchapter T of Title 46 CFR (also known as “T-boats”), and towing vessels.

*(b) The number of United States citizen mariners that have a valid Coast Guard merchant mariner credential with the necessary endorsements for service on unlimited tonnage vessels that are subject to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended*

---

<sup>25</sup> See Appendix F (USCG)

As per the USCG MMLD database, 33,215 unlimited mariner credentials have been issued in the last 5 years. The MWWG concurs unanimously that the MMLD output of 33,215 reflects solely the number of mariners who have been issued unlimited oceans credentials, including multiple endorsements, and does not reflect the number of full-time mariners that have recent experience on large oceangoing vessels or would be available in a real-world scenario.

The following caveats would apply to the number of mariners with unlimited credentials identified by the USCG MMLD:

#### DECK

- The number of endorsements is based upon the most superior endorsement held by an individual mariner. If a mariner holds lesser endorsements, those are not included in the count of mariners at the lower endorsement level.
- At each level of deck officer endorsement, the mariner counted holds a national endorsement with no limitation as well as the associated STCW endorsement (this latter endorsement is assumed if a mariner has an STCW Medical Certificate because full STCW status could not be queried from the MMLD).
- The mariners holding deck ratings are only included as deck rating if they did not also hold an officer endorsement

#### ENGINE

- The number of endorsements is based upon the most superior endorsement held for that propulsion mode by an individual mariner. If a mariner holds lesser endorsements, they are not included in the count of mariners at the lower endorsement level for the same propulsion mode.
- At each level of engine officer endorsement, the mariner counted holds a national endorsement with no limitation as well as the associated STCW endorsement.
- The mariners holding engine ratings are only included as an engine rating if they did not also hold an officer endorsement.

*(c) The number of United States citizen mariners that are involved in Federal programs that support the United States merchant marine and the United States flag fleet*

The following nine Federal programs support the United States merchant marine and the U.S.-flag fleet:

- i. Maritime Security Program (MSP) – The MSP provides financial support to 60 privately-owned large self-propelled U.S.- flag vessels to remain commercially viable in the foreign commerce of the United States and available upon request by the Secretary of Defense during times of war or national emergency. Financial support and access to U.S.-Government impelled preference cargoes are



necessary to offset the higher-cost of U.S.-flag vessel operation. The MSP helps retain 2,386 skilled American mariners, who are available to crew the U.S. Government-owned strategic sealift fleet and the U.S. commercial fleet, during times of peace or war.

Total number of Mariners employed by the MSP fleet of vessels: 2,386

ii. Voluntary Intermodal Sealift Agreement (VISA) - The VISA program is a partnership between the U.S. Government and the commercial maritime industry which helps provide the Department of Defense (DOD) with “assured access” to commercial sealift and intermodal capacity to support the emergency deployment and sustainment of U.S. military forces. Intermodal capacity includes dry cargo ships, equipment, terminal facilities, and intermodal management services.

Total number of Mariners employed through the VISA Program and whom are not included in other vessel categories: 1,724<sup>26</sup>

iii. MSC-owned vessels (Civil Service Mariners (CIVMAR) and Contract Mariners (CONMAR))- CIVMARs are federal government employees, and consist of licensed and unlicensed personnel. The current 5,567 mariner CIVMAR pool represents 80 percent of the MSC non-military workforce. CONMARs are commercial contract mariners working onboard MSC vessels and employed by commercial ship operating companies. These mariners are not part of the federal civilian workforce.

Total Civil Service Mariners: 5,576

iv. MSC-chartered vessels – This program provides a highly efficient and cost-effective means for the Department of Defense and the Navy to provide logistical support to the military during both war and peace. The program manages a mix of privately-owned vessels on charter including tankers, dry cargo, and other special mission vessels.

The number of Mariners onboard MSC Chartered ships varies depending on the total number of ships on charter at any given time.

v. MARAD Ready Reserve Force (RRF) – This program supports the expedited worldwide deployment of U.S. military forces. It is primarily tasked with the transportation of Army and Marine Corps Unit equipment, combat support equipment, and initial resupply during the critical surge period before commercial ships can be marshaled/commanded. This fleet is composed of 46 vessels in Reduced Operating Status (ROS). The vessels are maintained and operated by commercial operating companies through ship management contracts and are crewed permanent at a reduced level by CONMARs.

Total Mariners currently manning the RRF ROS ships: 626

---

<sup>26</sup> Note that MSP vessels belong to the VISA program, as do as significant number of Jones Act vessels. Additionally, many vessels in the VISA programs are tugs, and mariners serving on these tugs would not have experience relevant to crewing surge sealift vessels. Only VISA program mariners on large self-propelled ships not in the MSP program are counted.

vi. CARGO PREFERENCE - The Cargo Preference Program supports the U.S. merchant marine by mandating that all military cargo and 50 percent of most civilian Federal cargo be transported on U.S.-flag ships when available. Any curtailment of this form of federal support would directly result in some ship owners reflagging their ships to foreign registries which would reduce the number of mariner jobs and hence, a decline in the number of mariners with unlimited credentials available to meet the nation's sealift needs.

vii. U.S. Navy Strategic Sealift Officer Program (SSOP) - The Program (discussed in much more detail later in this section) allows students from the Federal and State Maritime Academies to be commissioned as an officer in the Navy Reserve upon their graduation and earning the unlimited credential as Merchant Marine Deck or Engine Officer.<sup>27</sup>

Total SSOs: 2,253

Total SSOs with valid MMC: 2,122

viii. Student Incentive Payment (SIP) Program—MARAD provides each year incentive payments for up to 75 eligible students as an incentive to become unlimited credentialed officers in the U.S. Merchant Marine. Students selected for the program receive up to \$8,000 per year during their four years of enrollment. Upon graduation, the SIP recipients must sail in the Merchant Marine for three years and maintain their Navy reserve commitment for at least eight years.

ix. Jones Act – Since 1789, the federal government has regulated coastal trade and enacted laws to maintain a domestic maritime industry to meet national economic and security needs. The Jones Act, passed in 1920, accomplishes this goal by requiring that vessels carrying passengers and merchandise between U.S. ports must be U.S.-owned, U.S.-crewed and U.S.-built. It helps the nation's ability to provide waterborne transportation to the states and territories as and when needed, and more importantly, during times of national emergencies including the facilitation of humanitarian assistance and disaster relief. There are approximately 97 large, self-propelled oceangoing merchant ships in the U.S. Jones Act trades as of July 2017.

Total estimated mariners currently working onboard US Flag Jones Act ships: 3,380

*(d) The number of United States citizen mariners that are available to crew the United States flag fleet and the surge sealift fleet in times of a national emergency;*

The U.S. citizen mariner available to crew the U.S.-flag fleet and the surge sealift fleet in times of national emergency must be an individual who holds the appropriate STCW credential and the necessary endorsements in addition to meeting the mandatory STCW medical standard. These individuals must have sailed recently and be able and willing to respond positively to an activation notice at short notice. Any attempt to equate this total with the 33,215 mariners listed with unlimited credentials as per the

---

<sup>27</sup> Many SSO officers listed in these totals are already counted in other mariner categories, such as serving on MSP or other commercial vessels, and thus SSO amounts are not necessarily additive to the mariner pool calculated in other programs.

MMLD database is misleading and incorrect. As responses to questions (d), (e), and (f) are interconnected, the following discussion addresses all three questions.

The number of U.S. citizen mariners that are available to crew the U.S.-flag fleet and the surge sealift fleet in times of a national emergency are defined as the 11,768 currently sailing mariners with unlimited credentials shown in Tables 1 and 2 of this report. Table 3 shows MARAD's reconciliation of the total number of mariners with current unlimited credentials issued as per the MMLD with the verified pool of CIVMARs (with unlimited credentials) employed by MSC and the estimated 11,768 mariners with unlimited credentials presented in Table 1. As shown in Table 4, an estimated 15,871 of the 33,215 mariners the USCG counted as having unlimited USCG credentials cannot be accounted for. The availability and the continuing proficiency of these mariners to sail on vessels with unlimited tonnage remains unknown in addition to any knowledge of their willingness to sail. Potential reasons for this predicament were discussed on page [18](#).

**Table 4. Mariners with Unlimited Credentials Issued by USCG<sup>28</sup>**

		Category	Total	
	Officers	Deck	7,794	14,645
		Engine	6,851	
	Ratings	Deck	13,560	18,570
		Engine	5,010	
USCG Count of Total Credentials Issued				33,215
Verified Pool of MSC CIVMARS	Officers	1,136	5,576	
	Ratings	3,985		
	Others	455		
Total USCG Credentials Issued less MSC CIVMARS				27,639
Total Supply of Actively Sailing Mariners with Unlimited Credentials (see Table 1)				11,768
Total Credentials Issued Less Actively Sailing Pool including MSC CIVMARS				15,871
Source: USCG MMLD, and MARAD estimate of actively sailing mariners with unlimited credentials				

*(e) The number of United States citizen mariners that are full-time mariners;*

Full-time U.S. citizen mariners are dedicated professionals who have repeatedly shown their commitment and passion to a maritime career. These individuals have recent sailing experience which the MWWG interprets unanimously as having sailed within the preceding 18 months. Their credentials are current, and they attend required refresher courses to maintain their endorsements as well as their

<sup>28</sup> See Appendix F for a detailed breakdown of mariners with specific qualifications.

competency. While their availability to sail on the surge sealift ships can be verified through their affiliation with labor unions in most cases, their willingness to do so is beyond prediction. Being civilians, their services at any time are voluntary by nature; they have no obligation to report when called unless they are within the service obligation phase for attending the Federal academy or receiving MARAD's SIP payment through a State Maritime Academy.

The total number of United States citizen mariners that are full-time mariners is the same as letter (d): 11,768

*(f) The number of United States citizen mariners that have sailed in the prior 18 months;*

The number of United States citizen mariners that have sailed in the prior 18 months is the same subset of actively sailing mariners quantified in letters (d) and (e) above: 11,768.

*(g) The number of United States citizen mariners that are primarily operating in noncontiguous or coastwise trades*

There are approximately 97 large, self-propelled oceangoing merchant ships in the U.S. Jones Act trades. These vessels would employ approximately 3,380 unlimited oceans mariners. Additionally, some non-union companies operating various non-merchant vessels (e.g., offshore supply ships) have identified approximately 500 unlimited oceans mariners that would be supplemental to this total.

*(h) The number of United States citizen mariners that are merchant mariner credentialed officers in the United States Navy Reserve*

The SSOP is a naval reserve program established to facilitate collaboration between the US Navy and all segments of the maritime industry. The SSOP supports national defense sealift requirement and capabilities, as executed by MSC as well as provides Navy Reserve Officers who are licensed merchant marine officers with experience in sealift, maritime operations, and logistics management.

All SSOs are required to obtain and maintain a USCG-issued MMC of (at a minimum) 3rd Mate unlimited tonnage or 3rd Assistant Engineer unlimited horsepower with oceans and STCW endorsements. Engineers are identified by their highest capacity across the power plant types of steam, motor, or gas turbine. Dual deck and engine credentialed SSOs are also identified by their highest capacity (deck or engine) which eliminates double counting within the program.

The SSOP's mission is to maintain a cadre of SSOs within the Reserve Component of the U.S. Navy composed of the following:

- Selected Reserve (SELRES)--component which primarily supports MSC and other Navy and joint commands.
- Individual Ready Reserve (IRR)--component comprised of actively sailing officers in the U.S. Merchant Marine who are qualified to operate merchant ships as naval auxiliaries and provide officer crewing for ships in the RRF and MSC's Surge Sealift Fleet.

It is important to note that the SSOP is a subset of the Navy Reserve and does not account for all persons within the U.S. Navy reserve who hold valid merchant mariner credentials.

SSOs are divided into the following categories:

Active Status- Officers on the Reserve Active Status List (RASL) who are eligible to train with or without pay, based on the members' category; serve on Active Duty (AD), Active Duty for Training (ADT), Inactive Duty, or perform Inactive Duty Training (IDT); earn retirement points; or be considered for advancement or promotion, if eligible.

- Recalled to Active Duty- Members who are voluntarily or involuntarily recalled to Active Duty per 10 U.S.C.
- SELRES - Active status members who drill for pay
- IRR - Personnel who must fulfill their military service obligation (MSO) under 10 U.S.C., members fulfilling a service obligation incurred via contract, and those who have fulfilled their MSO but voluntarily remain in an active status. The IRR is composed of the Active Status Pool (ASP) and the Volunteer Training Unit (VTU). Reservists in this category are on the RASL and are subject to involuntary recall to Active Duty per 10 U.S.C., 12301(a) and 12302.

Inactive Status- Reserve members on the Reserve Inactive Status List (ISL) are not eligible to receive pay for training, earn retirement points, or be considered for advancement or promotion or be advanced or promoted.

Because SSOs are comprised of actively employed and sailing or active duty military members, they are treated as a subset of the total number of the actively sailing mariner pool and not an addition to the total pool of mariners. As of May 23, 2017, the SSOP is comprised of 2,253 SSOs. Of the 2,253 SSOs, 2,122 hold valid MMCs split almost evenly across the deck (1,064 endorsements) and engine (1,058) endorsements, and 66 are in inactive status.

## Summary of Findings Under §3517 D (1)

The MWWG estimates a total supply of 11,768 actively sailing and qualified mariners with unlimited credentials available to crew the ready reserve fleet. MARAD estimate of the mariners required to activate the entire surge fleet<sup>29</sup> as well as operate the commercial fleet concurrently is 11,678<sup>30</sup>. Accordingly, there are sufficient mariners to activate the surge fleet assuming they are available and willing to sail.

Concurrent operations of the commercial fleet and sustained sealift that demands crew rotation will demand a total of 13,607 mariners with unlimited credentials. Accordingly, there is a deficit of 1,839 mariners with unlimited credentials even under the assumed condition of all those mariners being available and willing to sail.

---

<sup>29</sup> The entire surge fleet includes 46 RRF vessels, 15 MSC surge vessels, and 2 MARAD special mission vessels.

<sup>30</sup> See Table 3 for details.

## FINDINGS: §3517 D (2)

---

*Assess the impact on the United States merchant marine and the United States Merchant Marine Academy if graduates from State Maritime Academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine.*

Students at the U.S. Merchant Marine Academy (USMMA) are beneficiaries of a federally funded four-year academic program that enables them to earn a baccalaureate degree, an entry-level USCG unlimited credential for Deck or Engine officer and commission in any branch of the United States armed forces if offered. In return, USMMA graduates are required to sail in the merchant marine for a period of five years, maintain their USCG credential for a period of six years, and maintain their Navy Reserve commitment for a period of at least eight years. The USMMA graduates may opt to join one of the military branches for five years of active duty in lieu of their five-year service in the merchant marine.

A small number of students at the SMAs receive limited financial support through the Student Incentive Payment (SIP) Program to defray the cost of their mariner education. The SIP Program enrollment is currently limited to 75 students annually from all six SMAs, whereas their annual total enrollment is approximately 4,000. SIP recipients compose less than 2percent of the total SMA student body, and in return for the financial support, they are required to sail in the merchant marine for three years, maintain their USCG credentials for six years, and maintain their Navy Reserve commitment for at least eight years. They also have the option of pursuing an active duty military career in lieu of serving in the merchant marine.

In addition to SIP payments, MARAD provides other assistance to each SMA that directly benefits all students. These annual appropriations typically include \$2.4 million in direct support, about \$3 million in fuel assistance payments for the academy training ship, and the loan of a MARAD training ship maintained through federally appropriated funds.

The impact on the United States merchant marine should either USMMA and/or SMA graduates be asked to pursue certain maritime positions based on the overall needs of the U.S. Merchant Marine remains unclear.

While SIP Program graduates are obliged to serve when called upon, other SMA students are not required to do so. The federal government has no legal authority to conscript these students either before or after their graduation to meet the overall needs of the U.S. merchant marine. Any attempt to do so is likely to have a negative impact on the SMAs' recruitment efforts for future years.

Assignment of USMMA graduates to a maritime position (except through the Navy Reserve, of which the graduate may be a member) may be appropriate for the USMMA given its institutional mission and

the federal support provided to its students for their education.<sup>31</sup> However, this could also have an impact on USMMA's recruitment efforts in future years.

While the infusion of a new cadre of fresh merchant mariners with nationally acclaimed maritime academy education credentials is good for the industry and may enhance operational standards, even the appearance of mandated mariner service (particularly for non-SIP State Maritime Academy graduates) and possible conscription would be seen negatively by potential applicants to these academies unless there are concurrent incentives to offset and even reward their personal sacrifices.

---

<sup>31</sup> If this action were taken, there would be an impact on students who choose to join active duty military. About 25 percent of each graduating class chooses this option. If this option was not available because graduates were required to take a maritime position, it could impact USMMA's future recruitment efforts.



## FINDINGS: §3517 D (3)

---

*Assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners.*

The MWWG was tasked “to examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency...”. The MWWG used the USCG MMLD data as a basis to evaluate the pool of USCG credentialed mariners, and to make recommendations to enhance the availability and quality of interagency data. The MMLD is the only comprehensive source of data on qualifications of all U.S. merchant mariners (although sea service data on each mariner are not always consistently recorded). The maritime unions also maintain information on their respective members, including detailed sea-time data, but this information is not available to the U.S. Government.

The MMLD database is housed within the USCG Operations Systems Center and managed by the USCG Vessel Operations Center. In accordance with the provisions of a memorandum of understanding (MOU) between MARAD and USCG, MARAD receives an extract of the MMLD database on a quarterly basis. MARAD uses this information for populating its Mariner Outreach System (MOS) and analyzing the mariner population. MARAD re-programmed its MOS system to accommodate changes in MMLD database structure that occurred in 2014 to accommodate the new Merchant Mariner Credential (MMC) requirements.

The USCG designed the MMLD to facilitate the production and tracking of Merchant Mariner Credentials and the qualifications and limitations attached to the credentials. They did not, however, create the system to serve as a tool for counting the number of U.S. citizen mariners suitable for crewing U.S. government reserve vessels or otherwise able to operate vessels useful for military sealift, nor does the database provide any data on mariner availability or willingness to support sealift. Accordingly, the MMLD does not have pre-set query capabilities to determine the number of such mariners. Querying the MMLD for mariner data is further complicated by the complexity of the database and the USCG’s modification of the database during the last decade, including the reliance on text fields to record credentials issued after March 2014.

To support the MWWG, USCG personnel assembled a series of MMLD queries using key words and phrases to identify those mariners recorded in the MMLD who are likely to hold the unlimited ocean credentials needed to sail on U.S. Government sealift assets. These queries identified 33,215 mariners in all officer and rating categories out of approximately 210,000 mariners with unexpired credentials recorded in the MMLD. Based on MARAD’s long term expertise associated with MOS, agency staff analyzed the MMLD data on mariners with unlimited credentials. MARAD’s goal was to replicate the analysis of this information to ensure consistency in terms of data integrity and methodology across the agencies. MARAD and USCG personnel spent a significant amount of time in the discovery and learning

phase, and gained knowledge and understanding of the data by conducting a detailed review of individual mariner records.

The USCG queries had to sort through some 27,024 possible combinations of credential and limitation data in text format for domestic licenses and ratings, and 10,130 different combinations of limitations for international licenses and ratings. Consequently, the extraction of qualified mariners was subject to some miscounting and other errors. Additionally, information on the mariner sea service is incomplete in the MMLD.

It is the unanimous opinion of the MWWG that the MMLD should be replaced with a modern database capable of supporting high analytics. However, the national security needs are current and ongoing, and MARAD is required to provide information on mariner availability to meet the national security needs contemporaneously. In the interim, MARAD believes that with some methodological and technical adjustments, the quarterly extract of MMLD data provided to the MOS can serve as a reliable basis for ascertaining the pool of U.S. citizen mariners necessary to crew U.S. ships for national security surge and sustainment operations. USCG and MARAD are working to fully understand and thoroughly document the MMLD and MOS for this purpose. The interaction between the two systems, however, in their current state will take several additional months to complete. At a minimum, a complete coding of credential limitations into the MMLD, rather than by recording credentials limitations through text fields, would greatly increase efficiency and accuracy of evaluating the mariner pool. However, system-wide limitations may preclude USCG from making those changes.

In addition to the composition of the pool of credentialed mariners, MARAD must also assess the willingness of mariners to voluntarily sail in the U.S. merchant marine for wartime sealift or emergency operations. The MMLD is not suited for this purpose, however. Rather, MARAD would conduct a biannual survey of the pool of qualified mariners to determine the willingness and availability of mariners.

Because the MMLD is the only comprehensive source of information on U.S. mariners, it (or a successor USCG database) must necessarily be the basis to determine the size of the current mariner population and a sample needed for survey purposes. Regarding a survey based on MMLD information, MARAD staff has met with members of the DOT Bureau of Transportation Statistics (BTS) Office of Survey Programs to discuss the time, cost, and resource requirements necessary to undertake such a survey, both initially, and on a recurring biennial basis. BTS has experience in surveying mariner availability and conducted two such surveys in 2001 and 2002.

## FINDINGS: §3517 D (4)

---

*Make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners.*

The work conducted through the MWWG has provided an opportunity for MARAD, USCG, DOD and merchant marine stakeholders to reach consensus on how to identify and count U.S. citizen mariners suitable for crewing U.S. government reserve vessels or otherwise able to operate vessels useful for military sealift. The MWWG recommends the following actions to reliably count the number of U.S. mariners in the future.

**Update to MMLD** – Analysis of the existing MMLD data and its capabilities highlighted a number of shortcomings, the MWWG recommended that a new system supporting merchant mariner credential is necessary in order to address these shortcomings and to provide for additional capabilities that would assist in a more accurate count of available mariners.

It is the unanimous opinion of the MWWG that the MMLD should be replaced with a modern database capable of supporting high analytics. However, the national security needs are current and ongoing, and MARAD is required to provide information on mariner availability to meet the national security needs contemporaneously. So, until such time a replacement to the MMLD with core mariner availability functionality is available, the following are recommended although the USCG may be precluded from making those interim adjustments because of system-wide limitations:

**Credential Limitations should be coded** – Currently, credential limitations in the MMLD are not coded, but instead entered in the system in free text leading to tens of thousands of permutations that must be queried by key word to determine if the required qualifications for an individual mariner exist. New permutations can be created each time the data on credential limitations are entered due to changes in text wording. The text entered may also vary depending on the person entering the information which complicates a key word search. Restricting the entries to codes that represent a finite set of credential limitations would eliminate this problem.

**Sea Service should be recorded more comprehensively in the MMLD** – The review of sea-service data in the MMLD indicates that it is very valuable when it is available, but is incomplete for various reasons (e.g., reliance on letter reports and the ability of mariners to renew credentials without actual sea service). This lack of sea service data cannot be corrected through modifications to the MOS, but rather

would need to be entered by USCG in its updates to the MMLD. Some stakeholders have also recommended that a low-cost alternative may be to require companies to submit sea service data by mariner reference number to USCG in alignment with payroll transmission within 24 hours of paid wages.

**A periodic survey of the U.S. citizen mariner pool qualified to crew U.S. government reserve vessels should be undertaken to measure Mariner availability** – Since merchant mariner employment is voluntary, the number of people willing to sail in times of national need is unknown. A survey would allow MARAD to determine, with reasonable certainty, how many qualified mariners would be available and willing to sail in U.S. government reserve vessels if called upon to do so. The survey should be conducted at a minimum biennially to adequately keep track of changes in the mariner workforce' availability and willingness to sail.

**Enhancing Interagency coordination between USCG and MARAD** – Improvements in coordination could be reflected in an updated MOU between MARAD and USCG. The process by which USCG extracts data from MMLD and sends it to MARAD works well. However, given that MARAD receives data as of a specific date and the MMLD is continuously updated by the USCG, control totals against the extract should be established to ensure that the data are transmitted correctly and reflect at MARAD exactly what was produced by the MMLD for a given date and time. Establishing such control totals will facilitate the immediate identification of any differences in the data between the USCG extract and what MARAD receives. In the current process, anomalies may go unnoticed to the point at which errors cannot be resolved.

**MARAD should have a more active role in USCG's Change Control Process for MMLD** – MARAD as well as other key stakeholders for mariner availability including USTRANSCOM should be included as part of USCG's Change Control Board meetings for MMLD and new MMLD system development to remain aware of any program or system changes that may impact the data, methodology, output, or process used, particularly those affecting the MOS. While the communication between USCG and MARAD remains strong and both agencies work well together, the MWWG determined that there is no formal written process for identifying or assessing the potential impact of changes made on the MMLD on the MOS.

**Develop a broad-based reserve program** – MARAD should implement a purely civilian mariner reserve program that would identify and support qualified mariners willing to sail in commercial, MSC, and surge ships during an emergency. MARAD would provide limited financial assistance in training mariners and maintaining credentials, in turn for which mariners who participate would be obligated to sail in the event of a contingency. The reserve would ensure that adequate numbers of fully qualified and trained mariners are available and committed to meeting our nation's contingency crewing needs. Such a reserve would be easily adjustable in size and composition to reflect potential shortages by department in the mariner labor pool. A civilian reserve would also provide assured access to mariners with the specific skills needed for activation and operation of Government vessels.

**MARAD and other U.S. Government Agencies should support a healthy Merchant Marine** – Ultimately, the presence of qualified CONMARs depends on a healthy private Merchant Marine industry, supported by modern vessels supporting a diversity of international and domestic markets. Vessels support sealift directly and provide jobs to the mariners who are needed to crew government surge assets. The Government should fully support programs including the MSP, cargo preference, the Jones Act, and government chartering of privately-owned vessels. When DoD determines that national needs require more mariners and vessels than can be provided through current programs, those programs should be expanded to meet such needs.

**MARAD should provide modern Training Ships to the Maritime Academies** – The ability to train new generations of licensed and unlicensed mariners is dependent on the availability of modern training platforms. The current fleet of MARAD-supplied training ships used by the academies are approaching the end of their operational lives and do not reflect the technology found on board the world merchant fleet. Replacement of these older vessels is critical to the nation’s ability to provide crews for sealift in the future.

## APPENDIX A – FY17 NDAA SEC. 3517

### SEC. 3517. MARITIME WORKFORCE WORKING GROUP.

(a) IN GENERAL. —Not later than 120 days after the date of the enactment of this Act, the Maritime Administrator, in consultation with the Coast Guard Merchant Marine Personnel Advisory Committee and the Committee on the Marine Transportation System, shall convene a working group to examine and assess the size of the pool of United States citizen mariners necessary to support the

United States flag fleet in times of national emergency.

(b) MEMBERSHIP. —The Maritime Administrator shall designate individuals to serve as members of the working group convened under subsection (a). The working group shall include, at a minimum, at least 1 representative from each of—

- (1) the Maritime Administration, who shall serve as chairperson of the working group;
- (2) the United States Merchant Marine Academy;
- (3) the Coast Guard;
- (4) the Military Sealift Command;
- (5) the Navy;
- (6) the State maritime academies;
- (7) a nonprofit labor organization representing a class of licensed employees who are employed on vessels operating in the United States flag fleet;
- (8) a nonprofit labor organization representing a class of unlicensed employees who are employed on vessels operating in the United States flag fleet;
- (9) the pool of owners of vessels operating in the United States flag fleet, or their private contracting parties, that are primarily operating in coastwise trades; and
- (10) the pool of owners of vessels operating in the United States flag fleet, or their private contracting parties, that are primarily operating in international transportation.

(c) NO QUORUM REQUIREMENT. —The Maritime Administrator may convene the working group virtually and without all members present.

(d) RESPONSIBILITIES. —The working group shall—

- (1) identify the number of United States citizen mariners—
  - (A) in total;

(B) that have a valid Coast Guard merchant mariner credential with the necessary endorsements for service on unlimited tonnage vessels that are subject to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended;

(C) that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;

(D) that are available to crew the United States flag fleet and the surge sealift fleet in times of a national emergency;

(E) that are full-time mariners;

(F) that have sailed in the prior 18 months;

(G) that are primarily operating in noncontiguous or coastwise trades; and

(H) that are merchant mariner credentialed officers in the United States Navy Reserve;

(2) assess the impact on the United States merchant marine and United States Merchant Marine Academy if graduates from State maritime academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine;

(3) assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners; and

(4) make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners.

(e) REPORT. —Not later than 1 year after the date of the enactment of this Act, the Secretary of Transportation shall submit a report to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Armed Services of the House of Representatives, and the Committee on Transportation and Infrastructure of the House of Representatives that contains the results of the study conducted under this section, including—

(1) the number of United States citizen mariners identified for each category described in subparagraphs (A) through (H) of subsection (d)(1);

(2) the results of the assessments conducted under paragraphs

(2) and (3) of subsection (d); and

(3) the recommendations made under subsection (d)(4).

(f) INCLUSION OF MERCHANT MARINE-CREDENTIALIALED OFFICERS IN THE NAVY RESERVE. — For the purposes of this section, the term “United States citizen mariners” includes, but is not limited to, officers in the United States Navy Reserve who are holders of merchant mariner credentials, as determined by the Secretary of the Navy.

(g) SUNSET. —The Maritime Administrator may disband the working group upon submission of the report under subsection (e).



## APPENDIX B – CITIZENSHIP AND NAVY RESERVE REQUIREMENTS

### **46 US Code § 8103. Citizenship and Navy Reserve requirements**

- (a) Except as otherwise provided in this title, only a citizen of the United States may serve as master, chief engineer, radio officer, or officer in charge of a deck watch or engineering watch on a documented vessel.*
- (b)(1) Except as otherwise provided in this section, on a documented vessel—*
  - (A) each unlicensed seaman must be—*
    - (i) a citizen of the United States;*
    - (ii) an alien lawfully admitted to the United States for permanent residence; or*
    - (iii) a foreign national who is enrolled in the United States Merchant Marine Academy.*
  - (B) not more than 25 percent of the total number of unlicensed seamen on the vessel may be aliens lawfully admitted to the United States for permanent residence.*

## APPENDIX C – TERMS OF REFERENCE

### 1 - Mariner

Issue: The statute asks the working group to “identify the number of United States citizen mariners.” In order to answer this question a definition of “mariner” needs to be agreed to. What are the characteristics/qualifications of the individuals who we will include in this group?

Should the recommendation be that the working group defines a “mariner” as an individual who holds a valid U.S. Coast Guard (USCG) Merchant Mariner Credential (MMC)?

The intent of the working group is to “...examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency.” The US flag fleet, to include the MARAD and Military Sealift Command (MSC) surge sealift vessels, utilize USCG credentialed mariners. Mariners who do not hold a valid MMC are not qualified to sail aboard these vessels.

#### ACCEPTED

### 2 - US Flag Fleet

Issue: How do we define the make-up of the United states flag fleet? The statute states “...shall convene a working group to examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency.”

It further states we include Members of Labor for licensed and unlicensed employees in the US flag fleet.

Owners of vessels operating in the US Flag fleet for both coast wise and international trade.

That are involved in federal programs that support the US flag fleet.

That are available to crew the US flag fleet.

One option would be to define the US flag fleet as ONLY those vessels that are US flag vessels, operating in coastwise trades and international trade with the size and configuration ship which is in class with the Ready Reserve Force (RRF) and who employ the same type of mariner necessary to crew the Surge Sealift fleet.

Should the “US flag fleet” include Great Lakes vessels? These vessels are crewed by the same labor unions and many mariners sailing on the Great Lakes have, and maintain, their STCW endorsements.

#### ANSWERS

- **Include Federal Programs Jones Act vessels**
- **Add SSO back to the list of government programs**
- **If possible break out the list by federal programs. Mariner by vessel and extrapolate total number by the number of necessary by the Jones act or other federal program numbers.**
- **Available mariner – eliminate those who have permanent jobs on other ships as they will not be available.**

- Subparagraph d/e/f and all interact and ok to explain those relationships in the report.

### 3 - US Citizen Mariner

Issue: The statute asks the working group to “identify the number of United States citizen mariners.” What is a US Citizen Mariner? Do we account only for the individuals who are US Citizens? Was it the intent of US Congress that we only include mariners who are US Citizens in the answers to the questions? Or do we account also for individuals who are not US citizens but are legally allowed to form part of the crew composition as defined by statute?

#### **46 US Code § 8103. Citizenship and Navy Reserve requirements**

- (a) Except as otherwise provided in this title, only a citizen of the United States may serve as master, chief engineer, radio officer, or officer in charge of a deck watch or engineering watch on a documented vessel.*
- (b)(1) Except as otherwise provided in this section, on a documented vessel—*
  - (A) each unlicensed seaman must be—*
    - (i) a citizen of the United States;*
    - (ii) an alien lawfully admitted to the United States for permanent residence; or*
    - (iii) a foreign national who is enrolled in the United States Merchant Marine Academy.*
  - (B) not more than 25 percent of the total number of unlicensed seamen on the vessel may be aliens lawfully admitted to the United States for permanent residence.*

One option would be to define a U.S. citizen mariner be as any individual who holds a valid USCG MMC without regard to nationality.

46 USC 8103 authorizes USCG to issue MMC to unlicensed seamen who are an “...alien lawfully admitted to the United States for permanent residence”. These individuals are issued USCG credentials and currently sail aboard US flag vessels as common practice. Excluding non-US Citizens will yield inaccurate totals of the mariner population qualified to crew the fleet.

**ANSWER – Include all who are qualified to sail per the 46 USC 8103**

### 4 - Answers - Single number answers or broken down by specific mariner qualifications

Issue: Statute does not ask for the answers to be broken down by mariner types. This implies there is only one type of mariner with a single type of qualifications.

Should the working group break down the total number of mariners based on the necessary qualifications? (i.e. Master, chief engineer, QMED)? Should the answers to all of the questions be broken down or would breaking it down for the answer to one question suffice (i.e. Question B)?

Breaking down the answers would demonstrate the complexity of credentialing and what specific types of mariners with specific qualifications are necessary. Mariners are not interchangeable.

## **ACCEPTED**

**Conclusion: When possible answers will be provided broken out.**

### **5 - Medical Requirements**

Issue: In addition to STCW training requirements, all credentialed mariners would need a valid USCG medical certificate for service on vessels for which STCW applies.

Should the working group take into consideration whether a mariner has a valid medical certificate? Without a valid medical certificate, mariners cannot sail.

One option would be to identify both. \_\_\_\_\_ mariners hold the necessary qualifications but only \_\_\_\_\_ of those also have a valid medical certificate for service on vessels for which STCW applies.

## **ACCEPTED**

**Also include Transportation Workers ID Card under this caveat.**

### **6 - Endorsements**

Issue: Shall the committee look only at the necessary officer or rating endorsements (national and international) or shall it look at all of the necessary endorsements (i.e. security awareness, GMDSS, radar).

In order to sail most mariners need multiple endorsements. This increases the complexity of the analysis.

## **ACCEPTED**

**Conclusion: Endorsements being looked at are the basic national / international and kept at high level. Any caveats will be listed via Footnote.**

### **7 - Full Time Mariner**

Issue: How do we define a “full time mariner”? For example, if they have sailed aboard a vessel as a crew member in the past \_\_\_ months? How does a full-time mariner differ from “sailed in the prior 18 months”?

Recent sea service may be an indicator of availability and willingness to sail.

## **ANSWER**

- **Full-time mariner in unlicensed mariners is anyone who is available to receive medical benefits the entire year according to one labor union.**
- **USCG only looks at a credential as valid if it's valid within the 5 years.**
- **Full-time mariner is someone who has sailed in the last 18 months for licensed and unlicensed and outline it in the report.**

## **8 - Available Mariner**

Issue: How do we determine which qualified mariners are available? Do we create a list of assumptions to try to answer the question? For example, what assumptions should be made regarding non-union mariners, mariners sailing on Great Lakes, etc. What assumptions should be made regarding the effect of casualties?

Should we define “available mariners” only as those who are currently sailing as part of the industry?

### **ANSWER**

- **Explain any assumptions related to availability.**
- **18 months usually means actively sailing and proxy for availability.**
- **Subparagraph d/e/f and all interact and ok to explain those relationships in the report.**

## **9 - Federal Programs**

Issue: NDAA 3517 requires we look at the number of mariners “...that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;”

What federal programs should be included? Should a periodicity be applied?

Should the following programs be included? Are there other programs which should be included?

- Maritime Security Program (MSP)
- Voluntary Intermodal Sealift Agreement (VISA)
- MSC owned vessels (Civil Service Mariners (CIVMAR) Contract Mariners (CONMAR))
- MSC chartered vessels
- MARAD Ready Reserve Fleet (RRF) / SPECIAL MISSION
- CARGO PREFERENCE
- NAVY SSO

### **ACCEPTED**

## 10 - USCG Qualifications Vs Industry Standards

Issue: Should the working group only take into account USCG qualifications or evaluate if mariners meet industry standard / other necessary qualifications? One example of this is the stewards' department.

The amount of training and qualification necessary to be competent to sail as a steward or cook exceed what is required by USCG. Other sources of data would need to be utilized to determine the number of USCG credentialed mariners are competent to sail as steward vice the number who hold the necessary USCG endorsement. Is this data available and if so what is the source?

*IMO Maritime Labour Convention 2006*

*Guideline B3.2.2 – Ships' cooks*

*1. Seafarers should only be qualified as ships' cooks if they have:*

*(a) served at sea for a minimum period to be prescribed by the competent authority, which could be varied to take into account existing relevant qualifications or experience;*

*(b) passed an examination prescribed by the competent authority or passed an equivalent examination at an approved training course for cooks.*

2. The prescribed examination may be conducted and certificates granted either directly by the competent authority or, subject to its control, by an approved school for the training of cooks.

3. The competent authority should provide for the recognition, where appropriate, of certificates of qualification as ships' cooks issued by other Members, which have ratified this Convention or the Certification of Ships' Cooks Convention, 1946 (No. 69), or other approved body.

**ACCEPTED**

**Include Both UNLTD/LTD ABs**

**Add Security Clearance for DoD**

## 11 – Surge Sealift Fleet

Issue: Question D of the statute asks the working group to identify the number of mariners "...that are available to crew the United States flag fleet and the surge sealift fleet ". What vessels are included in the "surge sealift fleet"?

The following vessels should be considered for inclusion in the surge sealift fleet. All of these vessels are normally in a reduced operating status:

- 46 MARAD RRF vessels
- 2 MARAD Special Mission vessels
- 15 MSC Surge vessels

**ACCEPTED**

## **12 - Primarily Operating**

Issue: Question G of the statute asks the working group to identify the number of mariners "...that are primarily operating in noncontiguous or coastwise trades"; How do we define "primarily operating"? what methodology should be used for calculating the number of mariners working on these vessels?

One option would be to identify which vessels are "primarily operating" in these trades. Extract the billets; Billets x 2 = total number of mariners.

**Methodology: ACCEPTED**

## **13 - US NAVY Reserve credentialed mariners**

Issue: The statute also asks us to identify the number of mariners "... that are merchant mariner credentialed officers in the United States Navy Reserve". How will this question be answered?

The US NAVY SSO program has collected data on the individuals within their reserve program. Are there other sources of information to answer this question?

Should the working group also identify those merchant marine credentialed officers that are in the United States Army Reserve? **If possible, yes.**

**ACCEPTED**

## APPENDIX D – EVALUATION OF MMLD QUERIES AND DATA ON UNLIMITED OCEAN MASTERS

Introduction: The USCG's Merchant Mariner Licensing and Documentation system (MMLD) is designed only to issue mariner credentials. It is not intended to determine the number of U.S. mariners who are qualified, available, and willing to crew the sealift surge vessels of the United States. As such, there is no simple method by which the U.S. Government may identify the number of mariners who may be contacted during a national emergency to crew various departments on sealift surge vessels. Even so, prior to 2014, the practice of coding information on mariner credentials and limitations into specialized fields enabled MARAD to do a limited amount of data mining from the MMLD through its Mariner Outreach System (MOS). In particular the MOS could process MMLD data to count mariners with credentials suitable for service on unlimited tonnage surge vessels on international voyages.

After March 2014, however, USCG changed its means of recording credentials and limitations in the MMLD. To expedite the issuance of mariner licenses, USCG ceased encoding mariner credential limitation data in specialized fields for each mariner and instead recorded credential and limitation information exclusively as free text within the database. This change in practice disrupted the interface between the MOS (which relied on the encoded fields to identify mariner limitations) and the MMLD. Beginning in 2014, MARAD was no longer able to process MMLD data in the MOS using existing methods. Since then efforts to work around this issue have proven difficult.

MARAD is currently working with its contractors and USCG to modify MOS to work with the text format in MMLD. In practice, MOS would either be reprogrammed to search for key words within text strings in the fields of the MMLD that contain language indicating unlimited oceans permissions, or the MMLD data would be pre-processed to encode such data into specific fields before being processed by MOS. This modification to MOS is complicated, however, by the fact that the text wording to record similar credential and limitation information in the fields can vary from mariner to mariner and over time, including variations due to typographical errors. Moreover, there are many combinations of credentials within any given free text field. Using the March 2017 MMLD data, MARAD found 27,024 possible combinations limitation data for national credentials and 10,130 different combinations of limitation data for international credentials.

As part of the MWWG exercise, USCG conducted a series of queries on MMLD using key words and phrases to identify those mariners recorded in the MMLD who are likely to hold the unlimited ocean credentials needed to serve on U.S. Government sealift assets. These queries identified approximately 33,000 mariners in all officer and rating categories out of approximately 210,000 mariners with active credentials recorded in the MMLD. These queries, if accurate, could expedite the reprogramming of MOS or its interface with MMLD. Accordingly, MARAD personnel supporting the MWWG undertook a detailed review of the mariners selected through these queries for accuracy and completeness of the extracted data.<sup>32</sup> Given the complexity of record by record reviews, however, MARAD focused on the

---

<sup>32</sup> For this review, MARAD used MMLD data March 2017 extract as provided by the USCG. USCG uses more recent data for their analyses, which contains additions and expirations that have occurred since MARAD received its MMLD extract. Accordingly, MARAD analysis will produce slightly different figures than USCG.



query results for 2,466 masters with unlimited ocean credentials in both domestic and international waters.

**Results of MARAD Analysis of Selected Unlimited Ocean Masters:** The USCG keyword query of unlimited oceans masters indicated there were 2,466 individuals licensed to operate as a master on self-propelled vessels of unlimited tonnage upon oceans both domestically and internationally (in almost all cases this did not apply to auxiliary sail vessels, however). MARAD reviewed all limitations for these individuals and found that approximately 1 in 10 of the 2,466 identified masters appeared to have limitations on their licenses that prohibited unlimited oceans operations.<sup>33</sup> As such, 2,205 mariners appear to qualify as unlimited ocean masters. Results are shown in Table 1 below.

**Table 1: Total Unlimited Masters Identified by USCG Query of MMLD**

		Number	Percent
	Total Unlimited Masters with Supporting Credentials	2,205	89.4%
	Total Unlimited Masters without Supporting Credentials	261	10.6%
	Total All	2,466	

MARAD also evaluated using the MMLD sea-service data to determine if these data could assist in the MWWG to determine the number of U.S. citizen mariners that have sailed in the prior 18 months. Where available, MMLD sea-service data provides valuable information on currency, types of vessels, and the capacity in which mariners have sailed.

As shown in Table 2, MARAD found that of the 2,205 mariners that appear to have appropriate unlimited credentials, only 1,163 (53 percent) have records in the MMLD of actual sea service during the last 6 years. Moreover, only 767 (35 percent) have records of sea service that ended sometime during the 18-month period prior to the last update of the MMLD used in this analysis (for this exercise, the 18-month period was from September 30, 2015 to March 31, 2017).

Unfortunately, records of sea-service in the MMLD are not comprehensive. Several reasons account for the lack of specific sea-service records for many mariners in the MMLD. Certifications of sea service are often submitted by letters to the USCG which are not specifically recorded in the MMLD. Alternatively, some masters renew their credentials without actual sea service during the prior period. They can do this by completing an USCG-approved Renewal/Refresher course or go to the USCG Regional Exam Center and take a test. Thus, as it is, the MMLD cannot be used to provide a complete

---

<sup>33</sup> The review indicated that 261 of the masters identified in the USCG query have tonnage or other limitations that preclude their service as masters on self-propelled unlimited ocean vessels (see Table 1). Of these 261 masters, 246 have the limitation (but without reference to tonnage) "Of Towing Vessels Upon Oceans," including variations of this such as "Of Towing Vessels Upon Oceans and Western Rivers," and "Of Towing Vessels Upon Oceans Restricted to Astern Towing." Within the USCG query, these text phrases seem to override clear tonnage limitations pertaining to self-propelled vessels. Other incorrectly selected masters have the following limitations that do not reference tonnage: "Of Offshore Supply Vessels Upon Oceans" (7 masters); "Of Self-Propelled Vessels Not Including Auxiliary Sail Of Unlimited Tonnage Upon the Sheltered Waters of British Columbia..." (2 masters); "Radar Observer, Unlimited (3 masters); and "of High Speed Craft..." (3 masters). It is noteworthy that among the 2,205 qualifying unlimited masters reviewed (see Table 1), similar terminology is found, but it is also accompanied by clear authority to operate unlimited ocean vessels (in most cases, "Of Self-Propelled Vessels Not Including Auxiliary Sail Of Unlimited Tonnage Upon Oceans"). In future queries of the MMLD, the exclusion of the above text terms (e.g., "Of Towing Vessels Upon Oceans") as conveying unlimited self-propelled oceans tonnage authority would reduce the problem of over-counting masters. It is possible that these terms may also have inflated other totals of unlimited credentialed mariners, such as mates, in other MMLD queries conducted for this MWWG exercise, but there was insufficient time to confirm this possibility.

list of mariners who have sailed within the last 18 months or the specific vessels they sailed on, nor can the scope of completeness of sea service data in the MMLD be determined.

**Table 2: Total Unlimited Masters with Supporting Credentials: Records of Sea service**

		Number	Percent
	Within Last 6 Months (as of March 31, 2017)	457	20.7%
	Last 6 to 12 Months (as of March 31, 2017)	230	10.4%
	Last 12 to 18 Months (as of March 31, 2017)	80	3.6%
	Last 18 to 24 Months (as of March 31, 2017)	88	4.0%
	Last 24 to 36 Months (as of March 31, 2017)	104	4.7%
	Last 36 to 48 Months (as of March 31, 2017)	96	4.4%
	Last 48 to 60 Months (as of March 31, 2017)	97	4.4%
	Last 60 to 72 Months (as of March 31, 2017)	11	0.5%
	Reported Sea-Time Any Date	1,163	52.7%
	No Reported Sea-Time	1,042	47.3%
	Total	2,205	

Thus, although at least 767 unlimited ocean masters have sailed within the last 18 months, the actual number is certainly higher. This conclusion is supported by the fact that of the 301 unique vessels cited in sea service reports for persons with unlimited oceans master's credentials, there are no masters identified for 71 of these vessels (approximately 1 in 4). In these latter cases, the person identified as having unlimited ocean master's credential did not serve as a master on the identified vessel, but rather as a first mate or other position (see discussion on Table 3, below). Since the vessel would have obviously sailed with a master, it is evident that at least 71 sea-time reports are missing.

Additionally, the existing sea service reports for masters in the MMLD do not contain the names of various large oceangoing vessels known to have been sailing during the last 6 years. On the other hand, some of the vessels on which sea service is recorded are industrial vessels such as dredges, offshore supply vessels, and Great Lakes bulkers that would not necessarily represent suitable experience for operating large self-propelled oceangoing surge vessels on an international voyage.

Table 3 shows that only 42 percent of mariners with unlimited oceans credentials served as masters in their most recent sea service; another 38 percent served as first officers. The presence of sea service in positions below master is not unusual given the limited number of master's positions available. It is not uncommon for mariners (particularly younger mariners) to switch between serving as masters, first, and even second mates from voyage to voyage depending on position availability. In other cases, a mariner may have received credentials to serve as an unlimited oceans master but may not yet have had the opportunity to serve in this role, working instead as a first or second officer.

**Table 3: Total Unlimited Ocean Masters with Credentials: Position at Latest Recorded Sea-Time**

		Number	Percent
Master		479	
Captain		2	
Relief Captain		2	
<b>Total Master</b>		<b>483</b>	<b>41.5%</b>
Chief Mate		386	
Chief Officer		43	
Chief Engineer		2	
First Assistant Engineer		1	
First Class Pilot		2	
First Mate		3	
First Officer		3	
Mate		7	
<b>Total Chief or First</b>		<b>447</b>	<b>38.4%</b>
Second Mate		109	
Second Officer		7	
Second Engineer		1	
Second Assistant Engineer		1	
<b>Total Second</b>		<b>118</b>	<b>10.1%</b>
Third Mate		89	
Third Officer		6	
Third Assistant Engineer		1	
<b>Total Third</b>		<b>96</b>	<b>8.3%</b>
Offshore Installation Manager		1	
Marine Radio and Electronic Officer		1	
Deck Cadet		7	
Observer Deck		4	
<b>Total Miscellaneous</b>		<b>13</b>	<b>1.1%</b>
Able Seaman		6	0.5%
<b>Total</b>		<b>1,163</b>	

In general, more complete information about actual sea service from the MMLD would be extremely useful for determining the number of available unlimited mariners with recent seagoing experience in large oceangoing vessels. This information would include the dates, times, and vessels names of sea service, and would be recorded even in the case where letters were submitted. Moreover, there would be a checked box to confirm when credentials were renewed based on completion of a test or other valid method rather than through completion of sea service. With this information, MARAD could confirm recency of service and the type of vessel on which it was achieved for all mariners. For instance, an unlimited oceans master who has only served on the towing vessels in the river system for the last decade would be of less interest for crewing surge sealift assets than one who has served on a large oceangoing merchant ships. MARAD notes that, if it became standard practice to record all sea service for mariners, the utility of the MMLD for confirming the recency and relevancy of sea service over the preceding 18 months would be quickly established.

Note on Masters Who Appear to Have Limited Credentials: MARAD attempted to verify that 261 masters selected by the USCG text query, but whom appeared to have tonnage or other limitations, were in fact not qualified for unlimited oceans service.<sup>34</sup>

As shown in Table 4, MARAD found that of the 261 masters, only 25 had recorded sea service, and fewer than half of these were recorded during the last 18 months.

**Table 4: Total Selected Masters apparently subject to Limitations: Latest Recorded Sea-Time**

	Number	Percent
Within Last 6 Months (as of March 31, 2017)	6	2.3%
Last 6 to 12 Months (as of March 31, 2017)	3	1.1%
Last 12 to 18 Months (as of March 31, 2017)	1	0.4%
Last 18 to 24 Months (as of March 31, 2017)	0	0.0%
Last 24 to 36 Months (as of March 31, 2017)	4	1.5%
Last 36 to 48 Months (as of March 31, 2017)	4	1.5%
Last 48 to 60 Months (as of March 31, 2017)	3	1.1%
Last 60 to 72 Months (as of March 31, 2017)	4	1.5%
Reported Sea-Time Any Date	25	9.6%
No Reported Sea-Time	236	90.4%
Total	261	

Of the 25 mariners with recorded sea service, Table 5 shows 15 of those serving as captains, chief mates, or second mates. Only 7 were on large, deep water self-propelled vessels, however. The others (including the captain) were on offshore supply vessels, ATBs, tugs, or Great Lakes vessels. As in the earlier discussion, it is important to note that sea service data in the MMLD are not complete.

<sup>34</sup> MARAD notes that its analysis focused on master's references extracted by the USCG query, but was unable to verify if the USCG query extracted all the references that should have been extracted. In other words, MARAD focused on Type II error (the inclusion of references that should not have been included), but due to the large number of references in the MMLD and limited time, was unable to determine Type I error (the exclusion of references that should have been included).

**Table 5: Total Selected Masters apparently subject to Limitations: Position at Latest Recorded SeaTime**

		Number	Percent
Master		-	
Captain		1	
Relief Captain		-	
	Total Master	1	4.0%
Chief Mate		3	
Chief Officer		1	
Chief Engineer		1	
First Assistant Engineer			
First Class Pilot			
First Mate			
First Officer			
Mate		4	
	Total Chief or First	9	36.0%
Second Mate		5	
Second Officer		-	
Second Engineer		-	
Second Assistant Engineer		-	
	Total Second	5	20.0%
Third Mate		5	
Third Officer		-	
Third Assistant Engineer		-	
	Total Third	5	20.0%
Offshore Installation Manager		-	
Marine Radio and Electronic Officer		-	
Deck Cadet		-	
Observer Deck		-	
	Total Miscellaneous	-	
Able Seaman		5	20.0%
Total		25	

Other Information Available in the MMLD: MMLD data can also provide useful information on the age profiles of the unlimited oceans masters. Table 6 shows that the average age and age ranges of the 2,205 masters with unlimited oceans credentials. This information could be used to identify mariners most likely to be available during surge situations. For instance, a 70 year of mariner who has no recorded sea service for several years may be deemed as less available than a comparable mariner in his or her fifties. Although there is no age limit for qualified mariners, all U.S. Navy flag officers must retire by age 62, although this can be delayed until age 64 if the Navy Secretary or Secretary of Defense grants an extension, and flag officers may even serve until age 66 at the president's discretion. As shown in Table 4, almost 9 percent of the masters are 65 years or older, with the oldest being 90 years of age.

**Table 6: Age Profile of Unlimited Ocean Masters**

	Number	Percentage
Average Age (years)	<b>51.2</b>	
Maximum Age	<b>90.</b>	
Minimum "Age	<b>25.2</b>	
Age 65 and Greater	<b>191</b>	<b>8.7%</b>
Age 60 to Less than 65	<b>194</b>	<b>17.9%</b>
Age 55 to Less than 60	<b>395</b>	<b>17.9%</b>
Age 50 to Less than 55	<b>269</b>	<b>12.2%</b>
Age 40 to Less than 50	<b>483</b>	<b>21.9%</b>
Age 30 to Less than 40	<b>444</b>	<b>20.1%</b>
Age 25 to Less than 30	<b>29</b>	<b>1.3%</b>
	<b>2, 205</b>	

**Summary:** To assist the MWWG and prepare for potential modifications to MOS, MARAD analyzed the results of the USCG query of the MMLD pertaining to the category of unlimited oceans masters. This analysis revealed that 1 in 10 of the mariner references identified by the USCG query may not reflect unlimited oceans masters, and suggests that further refinement of the text query terms may be merited.

Overall, information learned about the accuracy of the USCG query results could be used to restore the previous functionality of the MOS, either by incorporating the successful text search strings directly into it or by pre-processing the MMLD data to conform to data coding practices used prior to March 2014.

The review of sea-service data in the MMLD indicates that it is very valuable when it is available, but is incomplete for various reasons (reliance on letter reports and the ability of mariners to renew credentials without actual sea time). This lack of sea service data cannot be corrected through modifications to the MOS, but rather would need to be entered by USCG. For instance, records should indicate when a credential is renewed through courses or testing but without sea service. It is unclear as to whether or not modifications to the current MMLD are feasible to address these issues.

Other data in the MMLD could contribute greatly to the nation's understanding of its mariner resources.

## APPENDIX E – MERCHANT MARINE PERSONNEL ADVISORY COMMITTEE (MERPAC) TASK STATEMENT #100

### **“Maritime Workforce”**

#### **I. TASK DESCRIPTION**

To provide input to MARAD’s working group that will examine and assess the size of the pool of U.S. mariners necessary to support the U.S. flag fleet in times of national emergency.

#### **II. BACKGROUND**

The National Defense Authorization Act of 2017, Section 3517 (Maritime Workforce Working Group) tasked MARAD in consultation with MERPAC and the Committee on the Marine Transportation System, to convene a working group to examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency. MARAD chartered the Maritime Workforce Working Group (sub-committee) under the auspices of the Maritime Transportation System National Advisory Committee (MTSNAC) to address the task.

The MTSNAC working group charter states that not later than November 1, 2017 after consideration of the report by the full MTSNAC, the MTSNAC Chair will deliver a final report pursuant to this Addendum to the Secretary of Transportation, through the Maritime Administrator. Pursuant to the National Defense Authorization Act for Fiscal Year 2017, the Secretary must submit the report to the Committee on Commerce, Science, and Transportation of the Senate, the Committee on Armed Services of the House of Representatives, and the Committee on Transportation and Infrastructure of the House of Representatives.

#### **III. PROBLEM STATEMENT**

The National Defense Authorization Act of 2017, Section 3517, requires that MARAD consult with MERPAC when examining and assessing the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency. The MERPAC chair represents the interest of the Committee in the MTSNAC working group.

#### **IV. TASK**

It is requested that MERPAC:

- 1) Provide general comments on the task and a plan on how MERPAC can assist the MTSNAC working group to complete the task.
- 2) Provide comments on the specific responsibilities identified in the Act, specifically:
  - a. identify the number of United States citizen mariners:
    - a. in total;
    - b. that have a valid MMC with the necessary endorsements for service on unlimited tonnage vessels that are subject to the STCW Convention, as amended;
    - c. that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;
    - d. that are available to crew the U.S. flag fleet and the surge sealift fleet in times of a national emergency;
    - e. that are full-time mariners;
    - f. that have sailed in the prior 18 months;
    - g. that are primarily operating in non-contiguous or coastwise trades; and



- h. that are merchant mariner credentialed officers in the United States Navy Reserve.
- 3) Assess the impact on the United States merchant marine and United States Merchant Marine Academy if graduates from State maritime academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine;
  - 4) Assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners; and
  - 5) Make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners.

#### V. ESTIMATED TIME TO COMPLETE TASK

MERPAC will provide the final recommendations to the Coast Guard by the fall meeting of 2017. Preliminary recommendations to the Coast Guard at the spring meeting of 2017. Intercessional meetings will be required to complete the task.

#### VI. COAST GUARD TECHNICAL REPRESENTATIVE

Luke Harden, (202)-372-1206, Luke.b.Harden@uscg.mil VII.

#### WORKING GROUP CHAIR

Andrew McGovern

---

Captain Andrew McGovern  
Chairman  
MERPAC

---

Ms. Mayte Medina  
U.S. Coast Guard  
Designated Federal Officer  
MERPAC

ENCLOSURE: Enclosure (1): The National Defense Authorization Act of 2017, Section 3517

Accepted: May 16, 2017 Modified:

Closed:

### **MERCHANT MARINE PERSONNEL ADVISORY COMMITTEE (MERPAC) REPORT - TASK STATEMENT #**

**100**

#### **“Maritime Workforce”**

- 1) *Provide general comments on the task and a plan on how MERPAC can assist the MTSNAC working group to complete the task.*

## General Comments

- Questions contained in the National Defense Authorization Act of 2017, Section 3517 are confusing and ambiguous. Terminology used should be better defined.
- Use the flexibility provided by the STCW Convention and Code (Art. 3&8)
- More US ships will solve problem (cargo preference and other programs) that will grow the mariner pool
- As we go forward with STCW 2010 less non-active and mariners working brown water will renew STCW Certifications due to cost in time and money. Some ideas to offset this issue are;
  - Subsidize upgrades and renewals of STCW Certificates.
  - Merchant Marine Reserve
- How do we retain mariners at that 8 to 12-year mark?
- The security clearance process is presently taking 4+ months for a private operator to turn around an interim secret clearance, this could greatly hamper the ability to ramp up quickly for a response when clearances would be required.
- MERPAC could help in identifying minimum CG and industry qualifications for billets
  - QMED Electrician- CG endorsement as electrician
  - QMED DW – QMED of any rating
  - GVA or GUD/E - entry level position
  - Stewards dept. will be an issue in a call out (SIU)
  - Bosun- by regulation “means the leading seaman and immediate supervisor of deck crew”

### *2) Provide comments on the specific responsibilities identified in the Act, specifically:*

#### *a) identify the number of United States citizen mariners:*

##### *a. in total;*

MERPAC could help in identifying minimum CG and industry qualifications for billets

- QMED Electrician- CG endorsement as electrician
- QMED DW – QMED of any rating
- GVA or GUD/E - entry level position
- Stewards dept. will be an issue in a call out (SIU)
- Bosun- by regulation “means the leading seaman and immediate supervisor of deck crew”

- b. that have a valid MMC with the necessary endorsements for service on unlimited tonnage vessels that are subject to the STCW Convention, as amended;*

Breakdown by management level (upper and lower), operational level (second and third) and ratings without officer endorsements for deck and engine.

- c. that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;*

MARAD and MSC should be able to provide this information.

- d. that are available to crew the U.S. flag fleet and the surge sealift fleet in times of a national emergency;*

- When developing assumptions - use a multiplier of 2 for each position.
- We cannot answer the question of who would answer the call due to many factors including the fact that service would be voluntary, current employment, family situation, personal, recent health, etc.
- With a database designed to do so, (not the present system) it may be possible to identify persons who have the appropriate and valid medical certificates, MMCs, endorsements, sea service, TWIC, etc. to be able to sail.
- This does not include security clearances or additional mission based training i.e.: CBRD, small arms, damage control, etc.

- e. that are full-time mariners;*

Seeking clarification: Does full time = actively sailing?

- f. that have sailed in the prior 18 months;*

Can partially answer because discharges will be in the current database but sea service letters most likely will not.

- g. that are primarily operating in non-contiguous or coastwise trades;*

Same answer as f.

- h. that are merchant mariner credentialed officers in the United States Navy Reserve.*

Only for the SSO program, other parts of the NAVY do not keep track of members' merchant mariner qualifications.

- 3) *Assess the impact on the United States merchant marine and United States Merchant Marine Academy if graduates from State maritime academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine;*

Negative impact all the way around without significantly improving mariner availability. Most State Academy graduates have no obligation for service and are not interested in any.

- 4) *Assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners; and*

System was not designed to provide the information MARAD needs.

- 5) *Make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners.*

As MERPAC we can address the CG ability. The CG needs to be funded to build the MMLD system that meets the needs of the CG, DOD, DOT, DOL, etc. as well as labor, shipping companies, mariners and other industry stake holders. In addition to enhancing the availability and quality of interagency data.

---

## APPENDIX F – USCG SUBMISSION TO MWWG

According to the US Coast Guard there are 63 National endorsements for merchant mariner credentials and 30 STCW endorsements. Not all mariners are created equal and capturing credential data becomes a complicated task. The USCG database Merchant Mariner Licensing and Documentation system (MMLD) was developed in the 1990s as a database for the issuance of mariner credentials and to ensure the consistent production of those credentials to the individual mariner. The MMLD was not developed for the purpose of extracting data for analysis and thus there are shortcomings with using the database for analytical purposes. As the system has grown and the credentials have changed and expanded (regulatory changes and international requirements) the limitations of the system have been emphasized. Question 3 of this NDAA task addresses the MMLD as separate tasking and goes into further detail on the issues which affect the MMLD performance.

The US Coast Guard issues credentials for officers and ratings working on vessels of all sizes. As noted above, mariners receive many different types of merchant mariner credentials or “endorsements.” These endorsements can be grouped by various criteria based on the type of vessels, route, and for the duties and authorities of the mariner on a given vessel.

Shipboard Department. Mariner credentials can be classed by the shipboard department the mariner will work in:

1. Deck department – responsible for the navigation of the vessel, handling of cargo, and general maintenance of the vessel other than the engine-room and shipboard machinery;
2. Engine department – responsible for operation and maintenance of the propulsion plant and shipboard machinery;
3. Steward department – responsible for hotel services; and
4. Staff Officers – includes medical personnel and administrative support personnel (these mariners are not carried on most commercial vessels).

Scope of Authority/Duty. Mariner endorsements can be grouped by level of responsibility and the scope of the authority associated with the credential. Generally, endorsements fall into three areas of authority:

1. The *management level* for a vessel's senior officers, the Master (Captain) and Chief Engineer and the officers next in seniority who will assume the duties of the Master or Chief Engineer in the event of the their incapacitation (Chief Mate and First Assistant Engineer/Second Engineer Officer);
2. The *operational level* for junior officers (Mates and Assistant Engineers); and
3. The *support level* for non-officer ratings. These are further divided into entry-level credentials and those requiring qualification and experience.

Vessel Size/Engine Type. Officer endorsements are issued for vessels of particular sizes (measured in gross tons) for deck officers, and by the type of propulsion machinery and its power output.

Deck officer credentials are given in the following general tonnage categories:

1. Less Than 200 Gross Tons;
2. Less Than 500 Gross Tons;
3. Less Than 1,600 Gross Tons; and
4. Unlimited Tonnage.

Engineer officer endorsements are for specific types of propulsion machinery, either steam, motor (diesel) or gas-turbine. Engineer credentials are also given for the following propulsion power increments:

1. Less Than 1,000 Horsepower;
2. Less Than 4,000 Horsepower; and
3. Unlimited Horsepower.

Waters. Deck officer credentials are valid for specific waterways, and with one exception follow a hierarchy in which the “superior” credential is also valid for all “inferior” waterways. The general order of superiority of deck officer endorsements based on the waters or “routes” they are valid for is:

1. Oceans;
2. Near-Coastal (up to 200 miles offshore);
3. Great Lakes;
4. Inland; and
5. Rivers.

The Coast Guard also issues endorsements for First Class Pilots for specific inland waterways. These are for mariners who will serve as navigational advisors on vessels navigating where specialized “local knowledge” is need for the vessel to safely transit the waterway.

The Coast Guard may also issue endorsements that are restricted to vessels working on a specific waterway with unique operational needs for which the “normal” requirements of an officer endorsement are not applicable. These are typically issued for deck officers on small vessels operating exclusively on unique inland waterways without substantial commercial traffic.

National/International Service. Mariners who operate exclusively on the domestic waters of the United States are only required to hold “national” endorsements. Mariners serving on vessels on international voyages, other than voyages to Canada, must also hold an internationally recognized credential issued in accordance with the STCW.

Vessel Type/Installed Equipment. The Coast Guard issues credentials for mariners working on specific types of vessels, such as towing vessels and oil, chemical, and Liquid Natural Gas (LNG) tankers. Specific credentials may also be required for deck officers on vessels with certain navigational and safety equipment such as radar and automatic radar plotting aids (ARPA), electronic chart display information systems (ECDIS) or communication and distress alert equipment for the global maritime distress and safety system (GMDSS).

Ready reserve fleet and surge sealift fleet is composed of large ocean going vessels. These are all in the 10,000 GRT or greater tonnage category. Unlimited deck officer endorsements may be issued with tonnage limitations between 2,000 GRT up to 9,000 GRT, in 1,000 GRT increments based upon the mariners limited experience on larger vessels (46 CFR Subpart D 11.402). Once the mariner has sufficient experience to qualify for an endorsement of 10,000 GRT or more they are authorized to work on a vessel of any size or to work without “limitation” to vessel size. The type of mariner credential required to work onboard the surge sealift fleet must be free of any limitation on the type of vessel they can work on. In other words, they must hold an “unlimited” credential for ocean going ships.

On the engineering side, mariners may also be subject to further propulsion power limitation; they may be limited as to the total propulsion power they are allowed to work on up to 10,000 HP in 1000 HP increments (46 CFR Subpart E 11.502). Engine propulsion credentials for the operation of the ready serve fleet cannot be limited to engine size i.e. the mariner must hold an unlimited HP credential in order

to fit the criteria for work onboard a ready reserve asset. Of the 63 ready reserve fleet vessels 24 are of steam engine. However, currently the U.S.-flag commercial fleet consists of only 11 steamships, not enough to produce sufficient steam engineers to support the commercial and surge sealift fleet.

In summary the type of credential mariners must possess in order to work on a ready reserve fleet asset is one which is not limited by tonnage, horsepower, vessel type or water or what is commonly referred to as unlimited credentials (and when applicable, which allows for work on steam powered engines of any size).

#### Medical Certificate

In addition to being qualified to meet the national and STCW requirements, all credentialed officers and qualified ratings need to be medically and physically qualified for the credential. Upon demonstrating that they are qualified, the US Coast Guard issues medical certificates for service on vessels. The standards for merchant mariner medical certification are contained in 46 CFR, Part 10 subpart C. The standards include requirements for vision, hearing, general medical examination and demonstration of physical ability.

1. Vision Requirements: The vision standards for merchant mariners are discussed in 46 CFR 10.305.
2. Hearing Requirements: The hearing standards for merchant mariners are discussed in 46 CFR 10.306.
3. The General Medical Examination: Title 46 CFR 10.304 requires that the general medical exam be documented and of sufficient scope to ensure that the applicant for medical certificate has no conditions that pose a significant risk of sudden incapacitation or debilitating complication. The regulation also requires documentation of any conditions requiring medications that impair cognitive ability, judgment or reaction time.
4. Physical Abilities: The duties and responsibilities that a mariner may perform can vary widely by credential. Mariners should be physically capable of performing all potential duties, both routine and emergency, associated with their credential(s).

In order for mariners to serve on a vessel, they must be able to demonstrate and the vessel operator should ensure that they hold a valid medical certificate.

#### TWIC

In addition to national and STCW requirements, all credentialed mariners need a valid Transportation workers' identification card (TWIC). The U.S. Code at 46 U.S.C. 70105 requires that individuals issued a license, certificate of registry, or merchant mariner document to have a biometric identity card issued by the Department of Homeland Security (DHS). This requirement would be applicable to those mariners serving in the strategic surge fleet. A TWIC would not be issued if the mariner poses a security risk.

## USCG FINDINGS: §3517 D (1)

---

### 1. Identify the number of United States citizen mariners:

- a. As of June 12, 2017, there were 208,718 unexpired credentials issued by the Coast Guard

issued to individuals. This number includes:

- Mariners holding either officer or rating endorsements;
- Endorsements authorizing service on all types of ships from small passenger vessels to tankships; and
- 3,291 individuals who are either aliens admitted for permanent residence or foreign nationals with authority to operate state numbered boats.

- b. The number of United States citizen mariners that have a valid Coast Guard merchant mariner credential with the necessary endorsements for service on unlimited tonnage vessels that are subject to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended;

The total numbers of mariners (union and non-union) holding an STCW unlimited endorsement in itself does not answer the question of availability of mariners. Not all endorsements qualify a mariner to serve in a particular position. Therefore; we are providing total numbers of mariners for the various positions required on board vessels.

The following tables provide totals for mariners who currently hold the national and STCW endorsements available to crew vessels of over 1,600 GRT and 4,000 HP operating on international/oceangoing voyages (STCW vessels). This is the population that crews the vessels during normal times and would also crew the military surges/ready reserve fleet during a national emergency.

The totals below are for the positions required to be on the vessel by its Certificate of Inspection. For engineer ratings, only total are provided for only the watchstanding Qualified Member of the Engine Department (QMED) endorsements of Oiler, Fireman/Watertender, Junior Engineer, and Engineman.

Please note that a mariner holding a superior endorsement may serve in all capacities that are inferior to their endorsement (subject to propulsion mode limitations). For example, a Second Assistant Engineer of Motor Vessels may also serve as a Third Assistant Engineer on a motor vessel, and a Chief Mate may serve as Second Mate or Third Mate. The totals below represent the mariners who hold the noted endorsements and do not include those with a superior endorsement who can serve in the inferior capacity.

As endorsements may be renewed without recent sea service. The Coast Guard is unable to determine when a mariner last sailed on their credentials based on the limited data in MMLD



DECK ENDORSEMENTS			
NATIONAL ENDORSEMENT	STCW ENDORSEMENT	7/18/17	STCW Med Cert
<b>DECK OFFICERS</b>			
Master of Ocean Self-Propelled Vessels of Unlimited Tonnage	Master of Vessels of 3,000- GT or More	2,915	2,453
Chief Mate of Ocean Self-Propelled Vessels of Unlimited Tonnage	Chief Mate of Vessels of 3,000- GT or More	804	710
Second Mate of Ocean Self-Propelled Vessels of Unlimited Tonnage	Officer in Charge of a Navigational Watch on Vessels of 500 GT or More	2,713	2,258
Third Mate of Ocean Self-Propelled Vessels of Unlimited Tonnage	Officer in Charge of a Navigational Watch on Vessels of 500 GT or More	3,061	2,373
<b>DECK RATINGS</b>			
Able Seaman, Unlimited or Limited	Able Seafarer-Deck and Rating Forming Part of a Navigational Watch	16,955	12,467
Ordinary Seaman	Rating Forming Part of a Navigational Watch	1807	1093

- The number of endorsements was based upon the most superior endorsement held by an individual mariner. If a mariner held lesser endorsements they were not included at the lower endorsement level.
- At each level of deck officer endorsement, the mariner was counted if they held a national endorsement with no limitation and also held the associated STCW endorsement.
- The mariners holding deck ratings were only included as deck rating if they did not also hold an officer endorsement

ENGINEER ENDORSEMENTS			
NATIONAL ENDORSEMENT	STCW ENDORSEMENT	7/18/17	STCW Med Cert
<b>ENGINE OFFICERS</b>			
Chief Engineer of Vessels of Unlimited Horsepower	Chief Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	2,705	2,187
First Assistant Engineer of Vessels of Unlimited Horsepower	Second Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	875	708
Second Assistant Engineer of Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2,447	1,991
Third Assistant Engineer of Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2,720	1,965

ENGINEER ENDORSEMENTS			
NATIONAL ENDORSEMENT	STCW ENDORSEMENT	7/18/17	STCW Med Cert
<b>ENGINE OFFICERS (STEAM)</b>			
Chief Engineer of Steam Vessels of Unlimited Horsepower	Chief Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	1026	793
First Assistant Engineer of Steam Vessels of Unlimited Horsepower	Second Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	240	167
Second Assistant Engineer of Steam Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	544	413
Third Assistant Engineer of Steam Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2322	1651
<b>ENGINE OFFICERS (MOTOR)</b>			
Chief Engineer of Motor Vessels of Unlimited Horsepower	Chief Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	2,596	2,105
First Assistant Engineer of Motor Vessels of Unlimited Horsepower	Second Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	825	675
Second Assistant Engineer of Motor Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2,306	1,895
Third Assistant Engineer of Motor Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2,633	1,905
<b>ENGINE OFFICERS (GAS TURBINE)</b>			
Chief Engineer of Gas Turbine Vessels of Unlimited Horsepower	Chief Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	1,450	1,103
First Assistant Engineer of Gas Turbine Vessels of Unlimited Horsepower	Second Engineer Officer of Vessels of 3,000 kW/4,000 HP or More	225	161
Second Assistant Engineer of Gas Turbine Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	571	434
Third Assistant Engineer of Gas Turbine Vessels of Unlimited Horsepower	Officer in Charge of an Engineering Watch of Vessels of 750 kW/1,000 HP or More	2,046	1,417
<b>ENGINE RATINGS</b>			
Qualified Member of the Engine Department (Watch-standing)	Able Seafarer-Engine	6422	4865
Wiper	Ratings forming Part of an Engine Watch or Able Seafarer-Engine	207	145

- The number of endorsements was based upon the most superior endorsement held, based upon propulsion mode, by an individual mariner. If a mariner held lesser endorsements they were not included at the lower endorsement level in the same propulsion mode.
- At each level of engine officer endorsement, the mariner was counted if they held a national endorsement with no limitation and also held the associated STCW endorsement.
- The mariners holding engine ratings were only included as an engine rating if they did not also hold an officer endorsement
  - c. The number of United States citizen mariners that are involved in Federal programs that support the United States merchant marine and the United States flag fleet;  
The U.S. Coast Guard has no means of measuring this information.
  - d. The number of United States citizen mariners that are available to crew the United States flag fleet and the surge sealift fleet in times of a national emergency;  
The U.S. Coast Guard has no means of measuring this information.
  - e. The number of United States citizen mariners that are full-time mariners;  
The U.S. Coast Guard has no means of measuring this information.
  - f. The number of United States citizen mariners that have sailed in the prior 18 months;  
The U.S. Coast Guard has no means of measuring this information.
  - g. The number of United States citizen mariners that are primarily operating in non-contiguous or coastwise trades; and  
The U.S. Coast Guard has no means of measuring this information.
  - h. The number of United States citizen mariners that are merchant mariner credentialed officers in the United States Navy Reserve;  
The U.S. Coast Guard has no means of measuring this information.

## USCG FINDINGS: §3517 D (3)

---

Assess the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners.

The U.S. Coast Guard is able to complete its legislative requirements for the issuance of credentials with the MMLD database. It is recognized that the system is outdated for its mission.

The U.S. Coast Guard is challenged to fulfill the data requests necessary to determine general mariner populations. Some of the queries take a long time to generate and require human intervention to determine the correct numbers.

The U.S. Coast Guard has worked with the Maritime Administration to ensure that it is able to obtain the information necessary to evaluate the pool of United States mariners to meet the needs of the Nation. At times this activity has been complicated as the database is updated to meet the credentialing needs of U.S. mariners.

## APPENDIX G – MILITARY SEALIFT COMMAND SUBMISSION TO MWWG



DEPARTMENT OF THE NAVY  
COMMANDER MILITARY SEALIFT COMMAND  
471 EAST C STREET  
NORFOLK VA 23511-2419

12450  
Ser N1/2114  
13 July 17

From: Commander, Military Sealift Command  
To: Maritime Workforce Working Group, US Maritime Administration,  
Subj: MILITARY SEALIFT COMMAND CIVIL SERVICE MARINERS

1. The MWWG asked Military Sealift Command to describe and quantify the Navy Civil Service Mariner (CIVMAR) community so that it could be appropriately considered in the context of the examination of the size of the pool of US citizen mariners necessary to support the US fleet in time of national emergency. The following is a synopsis of the CIVMAR community and size, as well as a broader description of MSC's fleet, capabilities and mission.

2. MSC's mission is to support the joint warfighter across the full spectrum of military operations. MSC provides logistics, strategic sealift, as well as specialized missions, operating about 115 ships daily around the world. More than 90 percent of U.S. war fighters' equipment and supplies travels by sea. The MSC fleet is a mix of government-owned and chartered vessels.. MSC is divided in eight programs as follows:

PM1–FleetOiler(approximately 15ships)  
PM2 – Special Mission (approximately 24 ships)  
PM3 –Prepositioning (approximately 27 ships)  
PM4 – Service Support (approximately 9 ships)  
PM5–Sealift (approximately 23 ships)  
PM6 -Fleet Ordnance and Dry Cargo (approximately 14ships)  
PM7 - Afloat Staging /Command Support (approximately 4 ships)  
PM8 -Expeditionary Fast Transport (approximately 8 ships)

In addition to the MSC fleet, our nation's sealift capability depends on the U.S. merchant fleet and Ready Reserve Force (RRF).

3. Approximately 53 of the MSC ships are government-owned and operated by Navy civil service marine employees (CIVMARs). The majority of these vessels are naval auxiliaries operated by credentialed U.S. mariners, except that four of the vessels are warships operated by hybrid crews consisting of both military personnel and civilians. MSC employs approximately 5,576 full-time CIVMARs for the government-operated vessels, as follows:

Licensed Deck Officers	549
Unlicensed Deck	1,626
Licensed Engine Officers	587
Unlicensed Engine	878
Supply Department	1,481
Communications Department	288

Subj: MISSION CAPABILITY ASSESSMENT

Pursers	47
Medical	49
Afloat Support (USCG credentialed trainers)	71

The total requirement reflects the number of CIVMARs required to man the vessels, as well as pipeline (22%) to account for off-ship time (e.g., leave, training, illness, discipline) and emergent requirements that address peculiarities with: 1) T-AH Reduced Operational Status 5-day activation; 2) EPF Class –High Speed Craft Type Rating training and certification; and 3) T- AKE/T-AO station ship surge capability. The requirement for CIVMARs varies from year to year depending on variables such as the number of ships in operation.

4. Credentials and Training. Currently, all of MSC licensed officers hold credentials to serve upon vessels of any tonnage and horsepower, but some vessels require specialized qualifications such as:

High Speed Craft Type-Rating - T-EPF  
Towing Endorsement - T-ATF and T-ARS  
Steam License - T-AH, AS, LCC and AFSB(I)  
GasTurbine License - T-AOE  
Tankerman DL Credential - T-AO, T-AOE and T-AKE

CIVMARs are trained to USCG standards, and also receive Navy specific training that is necessary to successfully operate in peacetime and wartime scenarios. The length of the required training varies depending on the position or ship the individual will serve upon.

5. Length of Tours. CIVMARs are normally assigned to a ship for a minimum of four months at a time, after which the mariner may request a relief in order to take leave. Although MSC attempts to relieve the individuals on the date requested, if a relief is not available a mariner may be required to remain with the ship until another mariner arrives to take their place. In a wartime scenario, it may necessary to require the mariners to remain with their vessel longer than four months.

6. Pipeline. For every shipboard position, MSC employs 1.22 CIVMARs to allow for leave rotations, shoreside training, discipline and the like. MSC pipeline is relatively lean compared to the private sector primarily because CIVMAR leave is limited by statute to one to two months a year depending on years of service. In an emergency, MSC can cancel/delay CIVMAR leave, recall CIVMARs from leave, cancel non-essential training and use part of its pipeline for emergent requirements. My POC for issues regarding this matter is Mr. Andy Kalgren who can be reached at (757) 443-2303.



M. C. MORRIS  
Director, Total Force Management

## APPENDIX H – SUBMISSION FROM COMMANDER, NAVY RESERVE FORCES COMMAND TO MWWG

Commander, Navy Reserve Forces Command (N14) Input to Maritime Transportation System National Advisory Committee Mariner Workforce Working Group in response to FY17 National Defense Authorization Act Section 3517

Section 3517 (d) (1) identify the number of United States citizen mariners—  
(H) that are merchant mariner credentialed officers in the United States Navy Reserve;

### **Introduction**

The U.S. Merchant Marine is an essential component of national defense. It provides the primary sealift capability necessary to meet defense requirements. Experience gained during previous conflicts has emphasized the importance of Navy coordination with all segments of the maritime industry. In order to facilitate these integrated operations, the Department of the Navy established the Merchant Marine Reserve, U.S. Naval Reserve Program. This program is now the Strategic Sealift Officer Program (SSOP).

The SSOP's mission is to maintain within the Reserve Component of the U.S. Navy a cadre of strategic sealift officers (SSOs) composed of the following:

1. Selected Reserve (SELRES). Component which primarily supports Military Sealift Command (MSC), but also other Navy and joint commands.
2. Individual Ready Reserve (IRR). Component comprised of actively sailing officers in the U.S. Merchant Marine who are qualified to operate merchant ships as naval auxiliaries and provide officer crewing for ships in the Ready Reserve Force (RRF) and MSC's Surge Sealift Fleet.

The SSOP supports national defense sealift requirement and capabilities, as executed by Military Sealift Command. SSOP provides Navy Reserve Officers which are licensed merchant marine officers with sealift, maritime operations, and logistics.

### **SSOP Composition**

As of May 23, 2017, the SSOP is comprised of 2,253 SSOs. All SSOs are required to obtain and maintain a U.S. Coast Guard issued Merchant Mariner Credential (MMC) of at least a 3<sup>rd</sup> Mate or 3<sup>rd</sup> Assistant Engineer unlimited tonnage/horsepower upon oceans with all requisite international Standards of Training, Certification, and Watchkeeping (STCW) endorsements.

Figure 1.

<b>Strategic Sealift Officer Program Total</b>			<b>2253</b>
<b>Active Status</b>		<b>2187</b>	<b>Inactive Status</b>
			<b>66</b>
<b>Recalled to Active Duty</b>	<b>Selected Reserve</b>	<b>Individual Ready Reserve</b>	<b>S-2</b>
<b>45</b>	<b>225</b>	<b>1917</b>	<b>66</b>

The following are the definitions to figure 1:

Active Status- Officers on the Reserve Active Status List (RASL) who are eligible to train with or without pay, based on the members' category; serve on Active Duty (AD), Active Duty for Training (ADT), Inactive Duty, or perform Inactive Duty Training (IDT); earn retirement points; be considered for advancement or promotion, if eligible.

Recalled to Active Duty- Members who are voluntarily or involuntarily recalled to Active Duty per 10 U.S.C.

Selected Reserve- Active status members who drill for pay.

Individual Ready Reserve- Personnel who must fulfill their military service obligation (MSO) under 10 U.S.C., 651, members fulfilling a service obligation incurred via contract, and those who have fulfilled their MSO but voluntarily remain in an active status. The IRR is composed of the Active Status Pool (ASP) and the Volunteer Training Unit (VTU). Reservists in this category are on the RASL and are subject to involuntary recall to Active Duty per 10 U.S.C., 12301(a) and 12302.

Inactive Status- Reserve members on the Reserve Inactive Status List (ISL) that are not eligible to receive pay for training, earn retirement points, or be considered for advancement or promotion or be advanced or promoted.

### SSOP MMC Capacity

<b>DECK</b>	<b>Master</b>	100
	<b>Chief Mate (CM)</b>	114
	<b>2<sup>nd</sup> Mate (2M)</b>	346
	<b>3<sup>rd</sup> Mate (3M)</b>	504
	<b>TOTAL</b>	1064
<b>ENGINE</b>	<b>Chief Engineer (C/E)</b>	75
	<b>1<sup>st</sup> Asst. Engineer (1 A/E)</b>	124
	<b>2<sup>nd</sup> Asst. Engineer (2 A/E)</b>	314
	<b>3<sup>rd</sup> Asst. Engineer (3 A/E)</b>	545
	<b>TOTAL</b>	1058
Total SSOs with valid MMCs		<b>2122</b>
Total SSOs		<b>2253</b>
Delta		131

Figure 2.

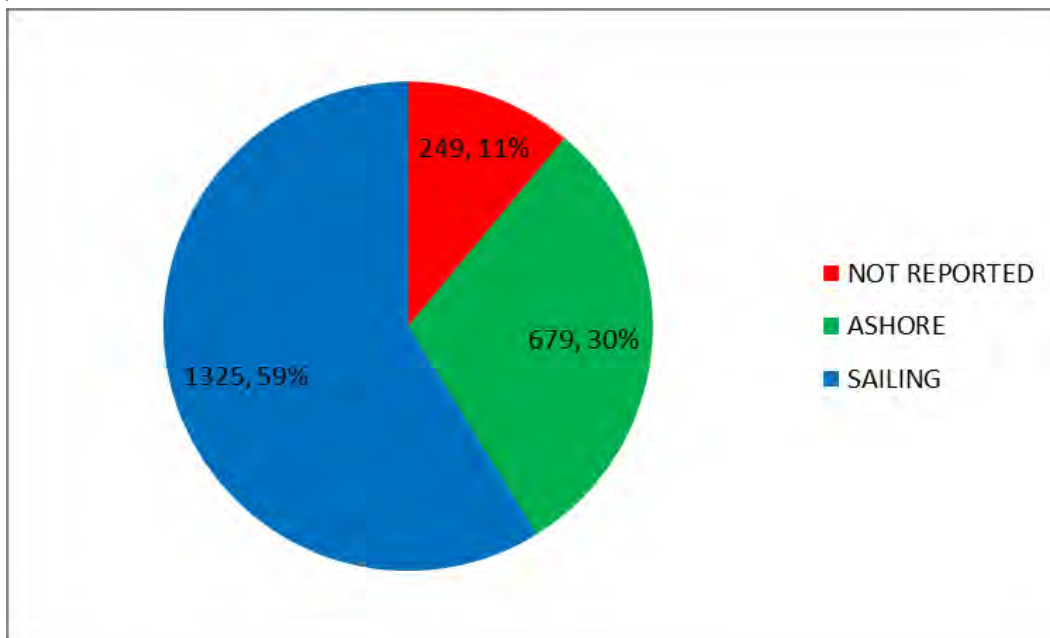
Of the total 2,253 SSOs in service 2,122 currently have an active MMC of least a 3<sup>rd</sup> Mate or 3<sup>rd</sup> Assistant Engineer unlimited tonnage/horsepower upon oceans. The 131 SSOs without an active MMC are either pending discharge, renewal, or have obtained a one-time MMC waiver for up to one year due to extenuating circumstances. Figure 2 depicts the number of SSOs that have a MMC at the various deck and engine officer levels. Engineers are identified by their highest capacity across the power plant types of steam, motor, or gas turbine. Dual deck and engine credentialed SSOs are also identified by their highest capacity (deck or engine).



### **SSOP Civilian Employment Status**

Civilian employment information (CEI) is reported by the member annually in the Navy Standard Integrated Personnel System. CEI contains the member's employer's name, job title, and U.S. Department of Labor Standard Occupational Code (SOC). The SSOP labels each member as either ashore or sailing based on their reported CEI. A member is labeled as sailing if their USCG MMC is valid and they provided CEI indicating they are working in a shipboard capacity. A member is labeled as ashore if their USCG MMC is valid or invalid and their CEI indicated something other than shipboard employment. Approximately 60% of the SSOP is labeled as sailing.

Figure 3.



## APPENDIX I – COMMENTS FROM DOD AND USTRANSCOM

### STANDARDIZED COMMENT MATRIX PRIMER

The matrix below is a Word document table to be used as a template for submitting comments on draft publications and draft program directives. Except as noted below, an entry is required in each of the columns. To facilitate consolidating matrixes from various sources, **do not adjust the column widths**.

#### Column 1 – ITEM

Numeric order of comments. Accomplish when all comments from all sources are entered and sorted. To number the matrix rows, highlight this column only and then select the numbering ICON on the formatting tool bar.

#### Column 2 - # COMMENT NUMBER

Used to track comments by source. Manually enter numbers from the first comment to the last comment. These numbers will stay with the comment and will not change when consolidated with other comments.

#### Column 3 – SOURCE

USA	US Army
USN	US Navy
USAF	US Air Force
USMC	US Marine Corps
JS	Joint Staff
USTC	USTRANSCOM
DLA	Defense Logistics Agency

#### Column 4 – TYPE

C – Critical (Contentious issue that will cause non-concurrence with publication)

M – Major (Incorrect material that may cause non-concurrence with publication)

S – Substantive (Factually incorrect material)

A – Administrative (grammar, punctuation, style, etc.)

#### Column 5 – PAGE

Page numbers expressed in decimal form using the following convention:

(Page I-2 = 1.02, Page IV-56 = 4.56, etc.) This format enables proper sorting of consolidated comments.

0 – General Comments

0.xx - Preface, TOC, Executive Summary (Page i = 0.01, Page XI = 0.11)

1.xx – Chapter I

2.xx – Chapter II

3.xx – Chapter III

x.xx – Chapter x, etc.

51.xx – Appendix A

52.xx – Appendix B

52.01.xx - Annex A to Appendix B

53.xx – Appendix C, etc.

99.xx – Glossary

**NOTE:** For Program Directives enter the page number as a whole number, (1, 2, 3, etc.) PDs are normally sorted by paragraph and line number and the page number helps to find the paragraph.

### **Column 6 – PARA**

Paragraph number that pertains to the comment expressed. (i.e. 4a, 6g, etc.)

**NOTE:** An entry in this column should be used when commenting on draft program directives. An entry is optional for comments on draft joint publications.

### **Column 7 – LINE**

Line number on the designated page that pertains to the comment, expressed in decimal form (i.e., line 1=1, line 4-5 = 4.5, line 45-67 = 45.67, etc.) For figures where there is no line number, use "F" with the figure number expressed in decimal form (i.e. figure II-2 as line number F2.02). For appendices, use the "F" and the appendix letter with the figure number (i.e appendix D, figure 13 as line number FD.13; appendix C, annex A, figure 7 as line number FCA.07)

### **Column 8 – COMMENT**

Provide comments using line-in-line-out format according to JSM 5711.01A, *Joint Staff Correspondence Preparation* (Examples are provided in CJCSI 5120.02, Joint Doctrine Development System. To facilitate adjudication of comments, copy and insert complete sentences into the matrix. This makes it unnecessary to refer back to the publication to understand the rationale for the change. Do not use Tools, Track Changes mode to edit the comments in the matrix. Include deleted material in the comment in the strike through mode. Add material in the comment with underlining. Do not combine separate comments into one long comment in the matrix, (i.e. 5 comments rolled up into one).

### **Column 9 - RATIONALE**

Provide concise, objective explanation of the rationale for the comment.

### **Column 10 - DECISION**

A - Accept

R – Reject (Rationale required for rejection.)

M - Accept with modification (Rationale required for modification.)

**NOTE:** This column is for the LA and JSDS use only. No rationale required for accepted items. Rationale for rejection is placed in the rationale comment box and highlighted for clarity. For modifications, the complete modified language will be placed (and annotated) as the bottom entry for that item in the “Comments” column and the rationale for the modification placed in the rationale comment box and highlighted for clarity.

## **TIPS AND TRICKS OF THE TRADE**

### **Headers and Footers**

1. Publication name
2. Classification (Unclassified/Secret/ etc.)
3. Column headings
4. Filename (insert from header/footer drop down menu)
5. As of “date” (insert from header/footer drop down menu—manually enter date when finalized for tracking purposes)
6. Page X of Y (insert from header/footer drop down menu—manually enter last page number for Y when finalized—tracks total # of pages and does not default back to actual page #)

### **Combining Matrixes**

1. Select all and correct for font and font size (Times New Roman, #10).
2. Copy one entire matrix and paste it a few lines below the last row of another matrix.
3. Adjust column widths as necessary to match one matrix with the other (use the column headings in the document header as a guide).
4. Merge the matrices into one by deleting the lines between the two.

### **Item (row) numbering (automatic numbering)**

1. Highlight column number 1 from top to bottom.
2. Delete the existing number and then renumber by selecting automatic line numbering on the formatting tool bar.

### **Sorting**

1. Select: “Table” on top menu toolbar.
2. Select: “Sort.”
3. Select: “Sort by, Column 5 (Page column), Number, Ascending.”
4. Select: “Then by, Column 7 (Line column), Number, Ascending.”
5. Select: “Then by, Column 4 (Type column), Text, Descending.”

### **Executive Summaries**

Do not make comments on the executive summary until the FC. Main body text will be copied and pasted into the executive summary reducing the amount of time spent on making the two accurate. The contractor with LA and/or JSDS input will include an executive summary in the FC released for review and comment.

Item	Source	Type	Page	Paragraph	Line	Comment	Rationale
1	Navy	C	All	All	All	Critical comment: There is significant amount of information that is noted “TBD” and requires continued work. Recognizing that the draft reflects a work in progress further coordination is still required to ensure that the document is complete and accurate. This review only provides comments as it relates to the document as written. Any changes, additions or modifications require further review and could be subject to possible non-concurrence from the Navy.	N/A
1	CAPE	A	4	Footnotes	1 & 5	RFFWG and MMT 2004 reports should be available electronically. Recommend add URL for these references.	Enable review of source reference documents using the world wide web.
1	L&MR	S	4	1	1	Recommend an opening paragraph about the surge fleet instead of discussing just the RRF	The focus of the Congressional report is to determine the size of the pool of US mariners necessary to support the US-flag fleet in times of national emergency. Accordingly the national emergency requirement for mariners is broader than the RRF.
2	L&MR	S	5	2	1	Change the title from “RRF Mariner Credential” to “Surge Fleet Mariner Credential Requirement”	The focus of the Congressional report is to determine the size of the pool of US mariners necessary to support the US-flag fleet in times of national emergency, which is broader than the RRF.
2	Navy	S	6	3 <sup>rd</sup> Criterion		ADDRESS: Reference to Fast Transit platforms as a general tonnage category and whether the 3 <sup>rd</sup> Criterion is also inclusive of Government Civilian Mariners.	Adds clarity to the description.
3	Navy	S	6	3 <sup>rd</sup> Criterion		ADD: Requirements/endorsements that include water jet propulsion.	With the introduction of High Speed Ferries to the Navy (T-EPF), the criterion should be expanded to include applicable licensing for Engineers to work on water jets.
3	L&MR	A	8	3	2	May want to state upfront in the background on page 4 that the Surge fleet consists of 63 vessels.	Clarity

4	L&MR	A	8	4		May want to state upfront under “RRF Mariner Credential” the summary paragraph regarding the type of credentialed mariner required for the Surge fleet.	Clarity
5	L&MR	A	8	4	3	Revise paragraph as follows: “In summary, the type of credential mariners must possess in order to work on a surge fleet vessel is one which is not limited by tonnage, horsepower, vessel type or water. Accordingly, the surge fleet requires a fully qualified mariner, commonly referred to as a mariner with unlimited credentials (and when applicable, which allows for work on steam powered engines of any size).”	Consistent terminology and clarity.
4	Navy	S	8	“Vessel Type/ Installed Equip.		ADDRESS: The ramifications if the 24 steam ships are eliminated from the surge sealift inventory.	If the steam ships are deactivated, there should be an associated reduction in the demand for steam engineers and lesser draw on the mariner work pool.
5	Navy	S	8	Medical Certificate		ADDRESS: How age may be a determining factor in the credentialing and certification process. When should a mariner’s age be considered a factor in qualifications and certifications?	Although not a discriminator, the merchant mariner pool is aging and will ultimately impact the total numbers of mariners available.
6	L&MR	A	9	4	1	Change the sentence to read: “At times and in accordance with the mission performed by sealift vessels supporting DoD and the contingency involved...”	Clarity
7	L&MR	A	9	5	1	Change the title as follows: “In summary, a surge fleet qualified mariner in terms of DoD surge fleet requirements, is one who holds:”	Clarity and consistency
1	USTRANS COM	S	10	6	5	The last sentence in the paragraph should have the total ships in the MSC Fleet (124) – clarifying the ship count in each program group	Easier to follow
8	L&MR	A	10	5	2-4	Explain private sector leave	The second sentence mentions the MSC pipeline is relatively lean compared to the private sector. It would be informative to understand the private sector leave practices.
7	Navy	S	10	Civil Service Mariners Employed by MSC	19.20	DEFINE: “During wartime, it may be necessary for the mariners to remain with their vessel for periods longer than four months.” How is “wartime” defined?	Add clarity.

9	L&MR	A	11	1	2	Consider replacing “credentialed U.S. mariners” with “CIVMAR”	Credentialed mariner is not defined in the study and introducing different terminology may confuse the reader.
10	L&MR	A	11	2		Spell out the class of vessels (e.g., T-AH = Hospital Ship)	Clarify
8	Navy	M	11	Civil Service Mariners Employed by MSC	10.11	ADD: The date and source of the information provided concerning MSC manning. In particular, the numbers should be as of the date the final report is signed. [NOTE: Comment applies to other various data presented in report as well.]	Add clarity. (See page 12 footnote for useful annotation example. In that case for USCG data, states, “Numbers reported are as of June 12, 2017.”)
9	Navy	S	11	Credentials and Training		EXPLAIN IN GREATER DETAIL: “Currently, all MSC licensed officers hold credentials to serve on vessels of any tonnage and horsepower, but some vessels require specialized qualifications such as:.....” Steam licenses are common from steam platform to steam platform. Explain what is notable that there is “specialized” qualifications for MSC licensed officers to hold credentials to work on steam plants on T-AH, AS, LCC. What is unique about these platforms?	“Specialized qualifications” requires greater clarity.
10	Navy	M	11	Credentials and Training		ADD: “LMSR (WATSON CLASS)” after “T-AOE”	LMSRs are part of the MSC inventory and have gas turbine propulsion
2	CAPE	S	12	1	4	The line “Additionally, it is anticipated that the surge timeframe for the most demanding scenario will require crew rotations that are expected to significantly impact the ability of labor unions to supply mariner to both the activated reserve fleet and the U.S. commercial fleet simultaneously” is at odds with DoD’s latest mobility study which only show a small portion of sealift ships being used for more than two voyages. By assuming that all or even a majority of surge sealift ships will require rotational crews, the need for mariners is likely portrayed as artificially high. Recommend the report base numbers using a reduced crew rotation requirement.	Mobility Capabilities Assessment final report, page 58, figure 30.
2	USTRANS COM	S	12	1	N/A	Recommend placing the “Force Projection Assumption” paragraph right after the “Summary of Findings under 3517D(1).	Serves to reinforce the numbers provided in the Summary paragraph. Current placement doesn’t flow well

							between two mariner credentialing paragraphs.
12	L&MR	S	13	1	3-4	Change the last sentence to read: “The MWWG concurs unanimously that the MMLD output of 33,215 reflects solely the number of surge fleet qualified mariner credentials issued, and does not reflect the number of mariners that may be available.”	The current wording is not accurate and appears to discredit the 33,125 number. Clarity and consistency.
13	L&MR	S	13	2-4		The “Discussion” section is an assessment of the USCG MMLD database system and should be moved to FINDINGS: section 3517(d),(3)	Clarity – places the response in the appropriate section of the report consistent with the Congressional Report requirements.
14	L&MR	A	13	3	7	Clarify that the 6,000 mariners reported by the unions does not include non-union mariners	Clarity – The difference between the USCG database number of 13,500 and union number of 6,000 may be attributable to the unaccounted non-union members.
15	L&MR	S	13	3	9	Replace “erroneous” with “challenging”	While the MMLD is not perfect, it does offer the best information available on mariner number. Labeling it erroneous insinuates that all the data is incorrect.
16	L&MR	S	13	3	3 <sup>rd</sup> bullet	Change the third bullet to read: “MMLD does not track unlimited credentialed mariners who...”	Clarity and consistent terminology
11	Navy	S	13	Discussion	Last Paragraph	REWRITE/EXPLAIN: How, if the current system is unable to provide relevant numbers of mariners, MARAD can provide an accurate inventory/quantity of available mariners?	The final paragraph on this page is vague and confusing and basically creates doubts about MARAD’s ability to accurately assess the mariner inventory.
17	L&MR	A	15	1		May want to include assistance to state maritime academies under Federal programs that support the U.S. merchant marine.	Consistency – MARAD provides funding to the state maritime academies (e.g., training ships)
18	L&MR	A	16	2	5	Replace “is” with “are” - Change sentence to read: “In addition, majority of them are affiliated...”	grammar
19	L&MR	S	16	2	8	Delete last sentence	Although U.S. Merchant mariners have a history of providing outstanding support to the nation, there have been incidents where mariners refused to sail on vessels in support of defense operations.



							<p>2014 – Syrian chemical weapons disposal. 6 out of 10 ROS crews aboard the RRF Cape Ray refused to sail in support of the chemical weapons disposal</p> <p>2003 – OIF. RRF ship Cape Taylor, Three civilians in the U.S. Merchant Marine say they refused to be vaccinated against smallpox and anthrax and were fired from the crew of a ship loaded with Army vehicles.</p> <p>1990 – DS/DS. A civilian manned MSC ship refused to enter the Persian Gulf without an escort</p>
20	L&MR	S	16	3	4-6	Consider changing this methodology to account for unlimited credentialed mariners who may be working on limited tonnage vessels (e.g., tug/barges) or foreign flag ships	It appears that the methodology for counting mariners employed on the current fleet of commercial ships may be flawed in that it does not account for unlimited credentialed mariners who may be working on limited tonnage vessels (e.g., tug/barges) or foreign flag ships
21	L&MR	A	16	4	2	Change “obtained” to “estimated”	clarification
3	CAPE	S	16 & 19	3, footnotes & 5	7, 1 & 2	MWWG methodology “...multiplying by the crewing ratio of two...” Footnote 13 says “...1.34 to 1.8 to 2.5 with the average being 2.0...” but Summary of Findings on page 19 uses crewing ratio of 1.75. Recommend MWWG use same ratio on both pages 16 and 19.	Consistent application of MWWG stated assumption.
3	USTRANS COM	S	17, 19	1, 5	1, 1	Add “actively sailing” in description of the 11,780	Accuracy
4	USTRANS COM	S	17	N/A	N/A	Table 3 needs a footnote describing where this data was received. Is it from the union halls? Are we really saying there are only 500 non-union mariners in the U.S.?	Accuracy
22	L&MR	A	17	1	1-2	May want to state that no cross check is available for non-union mariners	clarification

23	L&MR	A	17	2	Table 3	Change the sentence to read: “The estimated total supply of actively...”	“Estimated” is a better description and consistent with the terminology used to describe table 2.
24	L&MR	A	17	2	Table 3	Change the title of Table 3 to read: “Maritime Labor Union and employer estimated Mariners with Unlimited Credentials, Union and Non-Union	Clarification. Does this number reflect those unlimited tonnage credentialed mariners sailing on limited tonnage vessels and foreign flag vessels?
25	L&MR	A	19	4		Move the fourth paragraph – “Because SSOs are...” to the front so that it appears just under paragraph (h)	Consistency – answer the question up front consistent with the rest of the report.
26	L&MR	S	19	5		Change the first sentence to read: “The MWWG estimates a total supply of 11,780 qualified mariners with unlimited credentials available to crew the surge fleet.”	Clarity and consistency
4	CAPE	S	19	6	1	The line “Concurrent operations of the commercial fleet and sustained sealift that demands crew rotation will demand ...” assumes there is an across the sealift fleet need for rotation crews. That is not a fact based on the most recent mobility study. Recommend the report base numbers using a reduced crew rotation requirement.	Mobility Capabilities Assessment final report, page 58, figure 30.
5	USTRANS COM	S	19	6	N/A	Recommend including a table or a sentence (at a minimum) that explains where the 13,054 number came from. All previous tables describe the “supply” end of the mariner equation; recommend a “demand” table that reflects the number of billets. Also, recommend explaining in greater detail the origin of the 1.75 ratio and why its application is important.	Consistency and Clarity
12	Navy	S	19	Summary	21.23	PROVIDE GREATER DETAIL: As written, “Concurrent operations of the commercial fleet and sustained sealift that demands crew rotation will demand a total of 13,054 mariners with unlimited credentials while using a crewing ratio of 1.75 to each billet crewed by contract-mariners. Accordingly, there is a deficit of 1,274 mariners.” How was it determined to use a 1.75 crewing ratio?	Add useful information.
5	CAPE	S	20	1	1	All recommendations that are not “to enhance the availability and quality of interagency data ... for	Many recommendations are beyond what was tasked by the NDAA and

						evaluating the pool of United States citizen mariners” go beyond NDAA tasking and should be considered for striking from the report. There is inadequate emphasis on recommendations related to the data in this section.	the actual tasking is not adequately covered in this section.
27	L&MR	S	20	1		Change recommendations to reflect what is requested in Section 3517(d),(4), “make recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States Marines.”	While the recommendations found on page 20 and 21 may be valid, they do not provide an appropriate response required by Section 3517(d),(4).
28	L&MR	S	20	1	7 <sup>th</sup> bullet	What does restructuring the RRF crewing levels mean? Fully crewed? Increased crew over ROS? Please clarify	clarity
13	Navy	C	20	Findings	All	<p>General Comment: Many of these findings are not really findings. They are MARAD objectives to help bolster the U.S. shipping industry. Additionally, many (if not all) of these findings have not been introduced within the analysis and are seen here for the first time.</p> <p>MODIFY: Separate those findings that do not directly relate to the task at hand – providing Congress with a detailed compilation of the inventory of U.S. merchant mariners, licensing and credentialing, and the methodology used to determine those numbers. As written, there are findings that may indirectly contribute to a growth in the U.S. Merchant Marine but are not germane to this study. In particular:</p> <p>DELETE: Reference to issuing of legislation granting MARAD the authority to negotiate cargo sharing agreements. In the long term, this may help increase demand for U.S. flagged shipping and associated crewing but does not help answer today’s questions from Congress.</p>	The Findings should be a summary of the analysis and not a recommendation for issues not directly related to the study.

						<p>DELETE: Reference to restructuring the current ROS crewing levels requires additional analytical rigor to determine need, availability of merchant marines, and ultimately the costs of doing so.</p>	
--	--	--	--	--	--	--	--

						<p>DELETE: Reference to use of domestic waterborne transportation, including the development of the Marine Highway System.</p>	
--	--	--	--	--	--	--	--

## APPENDIX J – COMMENTS FROM CONSORTIUM OF STATE MARITIME ACADEMIES



CONSORTIUM OF STATE MARITIME ACADEMIES  
California • Maine • Massachusetts • Michigan • New York • Texas

July 31, 2017

Maritime Workforce Working Group  
U.S. Department of Transportation  
1200 New Jersey Avenue SE, West Building  
Ground Floor, Room W12-140  
Washington, DC 20590-0001

[Docket No. MARAD 2017-0117]  
Submitted via <http://www.regulations.gov/> Dear

Maritime Workforce Working Group:

We presidents of the nation's six State Maritime Academies (SMAs) appreciate the opportunity to provide the following information in response to the Working Group's Request for Public Input on the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency.

Our data shows that over the past four years, the State Maritime Academies, located in California, Maine, Massachusetts, Michigan, New York and Texas have produced an average of 723 licensed mariners per year, which is more than 70 percent of the new U.S. licensed merchant marine officers.

This annual production of licensed mariners is able to support the current peacetime need for merchant marine officers at the operational level and we hope to continue to so. However, the ability for the State Maritime Academies to continue to produce sufficient numbers of mariners is dependent on replacement of the fleet of aging training ships. The oldest of the training ships, the TS Empire State, was launched in 1961 and is reaching the end of its serviceable life. Loss of the Empire State would have a catastrophic impact on the coalition's ability to produce the mariners needed. Texas A&M Maritime Academy has no suitable training vessel, posing unique, difficult challenges to the school and limiting its ability to provide critical at-sea officer training for its cadets.

We continue to be concerned about the 2015 report on the future of our transportation workforce released by the U.S. Departments of Education, Labor, and Transportation, which anticipated a need for approximately 40,000 new U.S. Coast Guard credentialed captains, mates, pilots, and ship engineers between 2012 and 2022.

Significantly, the anticipated maritime workforce population shortage has also been raised by Gen. Darren W. McDew, Commander U.S. Transportation Command, who has expressed his concern regarding the availability of mariners to meet critical needs. In a January 2016 column in the *Virginian Pilot*, Gen. McDew said that the nation's ability to project a force with sealift in a manner similar to

Desert Storm 25 years ago is no longer guaranteed due to a dwindling pool of U.S. licensed mariners. McDew stated, "If the U.S. mariner base gets too small, we will have to rely on other countries to deploy our combat power." That possibility, he said, is only more worrisome as, "the global security environment is only getting more contested."

The State Maritime Academies are proud of our record of providing excellence in education and training while producing over 70% of our nation's licensed mariners. Recapitalization of our training ships, however, is essential to our ability to continue to produce the mariners required for our domestic economy and national security.

Please let us know if you have any additional questions or comments by reaching out to Mark Ruge at [mark.ruge@klgates.com](mailto:mark.ruge@klgates.com) or Laurie Purpuro at [laurie.purpuro@klgates.com](mailto:laurie.purpuro@klgates.com).

Thank you for your consideration of this important matter.

Sincerely,



RADM William J. Brennan, Ph.D.  
President  
Maine Maritime Academy  
Castine, ME



RADM Gerard P. Achenbach, Ed.D.  
Superintendent  
Great Lakes Maritime Academy  
Traverse City, MI



RADM Michael A. Alfultis, USMS, Ph.D.  
President  
State University of New York Maritime College  
Bronx, NY



RADM Thomas A. Cropper  
President  
California State University Maritime Academy  
Vallejo, CA



RADM Francis X. McDonald, LPD  
President  
Massachusetts Maritime Academy  
Buzzards Bay, MA



RADM Michael Rodriguez  
Superintendent  
Texas A&M Maritime Academy  
Galveston, TX

## APPENDIX K – SUBMISSION FROM AMERICAN MARITIME OFFICERS TO MWWG

### Mariner Availability Defined

Propose that the working group come to consensus on a definition of Mariner Availability that will not be changed in the future. Changes to this definition going forward would not allow apples to apples comparisons.

#### Proposed Definition

Mariner Availability – The number of actively sailing (with in the last 18 months) fully qualified mariners available to crew the RRF/Surge vessels in time of national emergency.

A fully qualified mariner

1. holds an unlimited tonnage, oceans license without limitations with the accompanying STCW requirements.
2. holds a current Transportation Worker Identification Card (TWIC)

holds a current USCG STCW Medical Certificate

### Great Lakes Mariners

Great Lakes Mariners are not counted in the Mariner Availability because of the unique operation of the ships on the Lakes. As has been discussed almost all Deep Sea vessels have two crews one working aboard and the other on vacation.

On the Lakes each job is a permanent job. The person working that job typically is aboard the vessel for 8 or more months a year. The ships are laid up for more than 2 months during the winter. The permanent crewmembers do call for reliefs for short periods of time during the season; but there are very few reliefs available. In short there is only one crew per ship on the Great Lakes rather than the two crews employed on Deep Sea vessels.

### USMS

MARAD already has the statutory authority and regulation under 46CFR 310.7(a) to reconstitute the USMS as a way to compel future officers to sail in national emergency. With some re-writing of the regulation serving officers could volunteer to join the service. Officers with Unlimited Tonnage, Ocean endorsements; who also held STCW endorsements in the past

could put their documents in continuity and continue to be in the service for 5 years (similar to inactive reserves). This would provide the ability to bring back mariners that had relatively recently retired or moved on to other employment.

## **Policies for Increasing the Number of Available Mariners**

1. Requiring 50% of US energy exports be carried aboard US flagged vessels. This would require a new program similar to MSP for the flagging in of tonnage. It would also likely require substantial tax credits to be made palatable. Such a program has long-term benefits but the number of vessels would start out small (10-15) and grow relatively slowly. Immediate impact would be the addition of around 500 Mariners.

2. Increase the number of MSP slots from 60 to 100. This would increase the number of mariners by around 1,700 but is also likely the most expensive option.

3. Require 100% of government cargo be shipped on US flagged vessels. This would increase the size of the fleet help boost the viability of the MSP carriers.

### **Additional Comments:**

It should be noted that although the number of mariners needed for the for

1. Continuous commercial operation
2. Continuous commercial operations & initial surge operation
3. Continuous commercial operations & sustained surge operations

can be quantified and have been by the MMWG these numbers are the absolute minimum.

During a conflict as commercial operators flag in additional U.S. commercial tonnage in order to wind down surge operations (IAW National Security Directive 28) additional mariners will be needed. Given the numerous variables for each possible contingency this number cannot be quantified but could easily number in the hundreds.



## APPENDIX L – COMMENTS FROM AMERICAN MARITIME OFFICERS



# American Maritime Officers

490 L'Enfant Plaza East SW • Suite 7204 • Washington, DC • 20024  
(202) 479-1166 • Fax (202) 479-1188

ISO CERTIFIED

28 JULY 2017

DOCKET MANAGEMENT FACILITY  
U.S. DEPARTMENT OF TRANSPORTATION  
1200 NEW JERSEY AVENUE SE  
WEST BUILDING, GROUND FLOOR, ROOM W12-140  
WASHINGTON DC 20590-0001

RE: DOCUMENT NO. MARAD 2017-0117

### ANNEX (1) UNIFIED COMMENTS OF AMERICAN MARITIME LABOR ORGANIZATIONS

THE AMERICAN MARITIME OFFICERS SUBMIT THESE SUPPLEMENTAL COMMENTS IN SUPPORT OF THE UNIFIED COMMENTS IN ANNEX (1) BY THE COMBINED AMERICAN MARITIME LABOR ORGANIZATIONS.

UNDER THE FISCAL 2017 NATIONAL DEFENSE AUTHORIZATION ACT, THE MARITIME ADMINISTRATION IS REQUIRED TO ESTABLISH A MARITIME WORKFORCE STUDY GROUP WITHIN ITS MARITIME TRANSPORTATION SYSTEM NATIONAL ADVISORY COMMITTEE. THE WORKFORCE STUDY GROUP'S MISSION IS TO DETERMINE THE NUMBER OF QUALIFIED U.S. MERCHANT MARINERS AVAILABLE TO MAN THE NATION'S STRATEGIC SEALIFT ASSETS DURING NATIONAL SECURITY EMERGENCIES.

THE UNABATED DECLINE OF THE PRIVATELY OWNED AND OPERATED U.S.-FLAG MERCHANT FLEET SINCE OPERATIONS DESERT SHIELD AND DESERT STORM IN THE PERSIAN GULF IN 1990 AND 1991 HAS RESULTED IN AN ALARMING SHORTAGE OF U.S. MERCHANT MARINE OFFICERS AND CREWMEMBERS TO STAFF 17 MILITARY SEALIFT COMMAND SURGE SEALIFT SHIPS AND 46 READY RESERVE FORCE SHIPS MANAGED BY MARAD AND CONTROLLED BY MSC UPON ACTIVATION AND TO KEEP ALL 63 SHIPS OPERATING SIMULTANEOUSLY FOR AS LONG AS NECESSARY DURING A CRISIS.

MARAD HAS CONFIRMED THIS CONSEQUENCE OF A DIMINISHING U.S. MERCHANT FLEET IN INTERNATIONAL TRADE - THE FLEET THAT IS THE PRINCIPAL SOURCE OF SURGE AND RESERVE FLEET OFFICERS AND CREWS - IN CONGRESSIONAL

TESTIMONY SEVERAL TIMES SINCE 2014, PUTTING THE NUMBER OF QUALIFIED AND AVAILABLE MARINERS MOST RECENTLY AT 11,200. CURRENT SCENARIOS CALL FOR A MINIMUM OF 13,000 OFFICERS AND CREWMEMBERS FOR INITIAL DEFENSE SHIPPING IN A CONVENTIONAL WAR.

GEN. DARREN MCDEW, COMMANDER OF U.S. TRANSPORTATION COMMAND, HAS DISCUSSED THIS PUBLICLY MANY TIMES AS WELL, CORROBORATING THE DIRECT, DIRE LINK BETWEEN A WANING U.S. MERCHANT FLEET IN COMMERCIAL MARKETS AND AN EVAPORATING MARINER POOL FROM WHICH SURGE AND RESERVE FLEET MARINERS ARE DRAWN. GEN. MCDEW HAS SAID OFTEN THAT THIS INCREASING SHORTAGE OF QUALIFIED U.S. MERCHANT MARINERS IS HIS SINGLE GREATEST SOURCE OF CONCERN.

THIS YEAR, THE U.S. MERCHANT MARINE ACADEMY AND SIX STATE-OPERATED MARITIME ACADEMIES GRADUATED NEARLY 1,200 CADETS AS MARINE ENGINEERS AND LICENSED DECK OFFICERS. BUT NO ONE KNOWS AT THIS POINT HOW MANY OF THESE YOUNG MEN AND WOMEN WILL SEEK CAREERS AT SEA IN THE U.S. MERCHANT FLEET OR CHOOSE THE MILITARY OR JOBS ASHORE AS ALTERNATIVES.

AMERICAN MARITIME OFFICERS SUPPORTS AND ENCOURAGES IMMEDIATE ACTION ON ALL OF THE RECOMMENDATIONS LISTED IN THE JOINT SUBMISSION BY MARITIME LABOR CONTAINED IN ANNEX (1) WITH THE FOLLOWING SUPPLEMENTAL COMMENTS:

- MARITIME SECURITY PROGRAM. FULLY FUND AND EXAMINE POTENTIAL FOR EXPANDING THE NUMBER OF COMMERCIAL SHIPS BY AS MANY AS 40 VESSELS.
- JONES ACT. SUPPORT THE JONES ACT TO STRENGTHEN HOMELAND SECURITY, NATIONAL SECURITY, THE INDUSTRIAL BASE AND THE HUNDREDS OF THOUSANDS OF AMERICAN JOBS CREATED BY THE JONES ACT.
- CARGO PREFERENCE. A PRESIDENTIAL DIRECTIVE IS NEEDED TO ENSURE THAT 100% OF GOVERNMENT IMPELLED CARGO GOES ON AMERICAN FLAG SHIPS.
- CARGO PREFERENCE ENFORCEMENT. THE MARITIME ADMINISTRATION NEEDS REGULATORY POWER TO EXERCISE THE CONGRESSIONALLY MANDATED AUTHORITY TO ENSURE SHIPPERS ADHERE TO CARGO PREFERENCE LAWS.
- BILATERAL SHIPPING AGREEMENTS. NEGOTIATE BILATERAL CARGO SHARING AGREEMENTS TO INCREASE CARGO AVAILABLE TO THE U.S. FLAG FLEET, EXPANDING THE FLEET AND INCREASING THE NUMBER OF MARINERS.
- ENERGY RESOURCES ON U.S. FLAG SHIPS. SUPPORT AND PROMOTE PENDING LEGISLATION TO RESERVE REASONABLE SHARES OF U.S. ENERGY EXPORTS -CRUDE OIL, LIQUEFIED NATURAL GAS AND COAL -FOR U.S.-FLAG MERCHANT SHIPS.
- INFRASTRUCTURE. ESTABLISH A NATIONAL TRANSPORTATION POLICY AND PROVIDE FUNDING TO STIMULATE A VIBRANT A NATIONAL MARINE HIGHWAY SYSTEM TO FULLY UTILIZE AMERICA'S WATERWAYS AND PORTS TO REDUCE ROAD CONGESTION AND POLLUTION. REMOVE THE DOUBLE TAXATION OF THE HARBOR MAINTENANCE TAX.

- CONSIDER TAX CREDITS OR OTHER INCENTIVES TO STIMULATE PRIVATE INVESTMENT IN A LARGER U.S. MERCHANT FLEET AND ITS ATTENDANT GROWTH OF THE U.S. MERCHANT MARINER WORKFORCE.

LABOR IS DEDICATED TO WORKING CLOSELY WITH GOVERNMENT AND INDUSTRY TO COORDINATE THE EXPANSION AND TRAINING THAT THESE INITIATIVES WILL NEED TO REVERSE THE PAST DECADE'S PRECIPITOUS DECLINE AND REBUILD THE AMERICAN MARINER BASE BACK TO ITS NATIONAL SECURITY REQUIREMENT.

Sincerely,



J. Michael Murphy  
National Vice President, Government Relations  
American Maritime Officers  
[mmurphy@amo-union.org](mailto:mmurphy@amo-union.org)  
202-560-6889 cell  
202-479-1166 office

## American Maritime Officers

### Annex (1)

**RE: American Maritime Labor Unified Comments to Docket No. MARAD 2017-0117**

Dear Sirs:

On behalf of the undersigned American maritime labor organizations, we are submitting these comments in response to the Maritime Workforce Working Group request for public input on the status of the U.S. merchant mariner workforce. Collectively, our unions represent the overwhelming majority of licensed and unlicensed American merchant mariners working aboard U.S.-flag commercial vessels engaged in all aspects of our nation's foreign and domestic shipping trades, including all 60 U.S.-flag vessels participating in the Maritime Security Program (MSP). We also represent all the civilian merchant mariners who man the U.S. Government's fleet of surge vessels, including the Maritime Administration's Ready Reserve Force (RRF) and the Military Sealift Command's Reduced Operating Status (ROS) vessels.

Our organizations are keenly aware of the shortfall in the number of U.S. citizen mariners currently available to crew the government and private vessels the Department of Defense estimates it will need under various wartime scenarios. As such, we have a direct interest in the report being prepared by the Maritime Workforce Working Group on this issue. We greatly appreciate the opportunity to present our suggestions on how to not only halt this decline in the number of available qualified American mariners but how to increase the number of vessels operating under the U.S.-flag and therefore the number of American mariners working and available.

The history of our country demonstrates that the United States needs a strong, active, militarily useful U.S.-flag merchant marine and its American citizen mariners to protect and enhance our nation's economic security and national defense. Privately-owned United States-flag vessels and their crews have always responded quickly and effectively to our nation's call, providing the commercial sealift sustainment capability and civilian maritime manpower needed by the Department of Defense to support America's military objectives around the world.

It is important to note that beginning in 2002 with the inception of military operations in Iraq and Afghanistan, at least 98 percent of all related cargoes have been transported to the region on either U.S.-flag commercial vessels or U.S. government owned and/or controlled vessels - ***- all of which have been crewed by United States citizen civilian merchant mariners.***

Most significantly, since 2009, privately-owned U.S.-flag commercial vessels and their civilian U.S. citizen crews have transported more than 90 percent of the sustainment cargo needed to support U.S. military operations and rebuilding programs in Iraq and Afghanistan. Vessels enrolled in MSP - all of which are crewed by United States citizen civilian merchant mariners - carried 99 percent of these cargoes.

However, and despite more than two hundred years of essential and patriotic service -in war and peace -the viability of our industry and its continued ability to provide this invaluable service to our country is in

jeopardy. In 1960, there were 2,936 ships over 1,000 gross tons flying the American flag. Today, there are only 169 - including only approximately 80 U.S. flag ships operating in the U.S. foreign trades that carry less than two percent of all U.S. exports and imports. Compounding the serious loss in sealift capability is the concurrent reduction in the number of American licensed and unlicensed merchant mariners ready and able to crew the government and privately-owned vessels needed by the Department of Defense in time of war or international emergency.

In March 2015, General Paul Selva, Commander, United States Transportation Command, testified before the Senate Committee on Armed Services. He told the Committee: "The reduction in government impelled cargoes due to the drawdown in Afghanistan and reductions in food aid . . . are driving vessel owners to reflag to non-U.S.-flag out of economic necessity . . . With the recent vessel reductions, the mariner base is at a point where future reductions in U.S.- flag capacity puts our ability to fully activate, deploy and sustain forces at increased risk."

Similarly, at Congressional hearings held earlier this year, General Darren McDew, Commander, United States Transportation Command, and Joel Szabat, Executive Director, Maritime Administration, each warned that there is a current shortage of approximately 2,000 mariners. General McDew and Mr. Szabat have further noted that this reduced mariner pool puts our industry on the edge of being able to sustain immediate sealift requirements, and that it would not be able to meet sustained requirements beyond the first four to five months of a conflict. We agree with the conclusions reached by General McDew and Mr. Szabat

Unless this dangerous decline in American might is halted and reversed and we put American mariners back to work aboard United States-flag commercial vessels, we as a nation will soon be forced to hand over the security of the United States, along with the safety and supply of our troops deployed overseas, to foreign flag vessels and crews. This is totally unacceptable to us, and we believe it should be totally unacceptable to every American who wants to put the security of America first!

We believe it is essential that the report prepared for Congress by the Maritime Workforce Working Group focus on ways to stop the further loss of U.S.-flag vessels and the outsourcing of American maritime jobs to foreign workers. Equally important, we urge that the report contain realistic initiatives that would increase the number of vessels operating under the U.S.-flag and increase the number of American mariners available and qualified to crew the vessels needed by the Department of Defense.

The time is now for our government to act and we urge the Maritime Workforce Working Group to include the following in its report:

- **Maritime Security Program:** The Maritime Security Program and its fleet of 60 privately-owned militarily-useful United States-flag commercial vessels and their U.S. citizen crews form the basis of America's commercial sealift capability and must be maintained. As noted previously, these vessels and crews, and the worldwide intermodal and logistics networks owned and controlled by the shipping companies participating in the Maritime Security Program, are readily available to the Department of Defense whenever needed to meet the military, economic and homeland security requirements of the United States. Consequently, it is essential that Congress and the Administration make clear that they do and will consistently support the annual funding levels for this program as authorized by Congress. To do otherwise is to inject a measure of instability into the Maritime Security Program, making it extremely difficult for the vessel operators to continue to upgrade and modernize

their fleets of militarily useful vessels and to continue to operate under the U.S.-flag. **Congress and the Administration should actively work to ensure that the Maritime Security Program is fully funded at the levels authorized in Public Law 114-113 (the Consolidated Appropriations Act, 2016).**

- **Presidential Directive - Cargo Preference Shipping Requirements :** Federal shipper agencies and departments are required by law to comply with existing U.S.-flag shipping requirements which reserve the carriage of a percentage of U.S. government generated cargoes for U.S.-flag commercial vessels provided such vessels are available - - and are available at fair and reasonable rates. All too often, however, Federal shipper agencies and departments, intentionally or otherwise, fail to comply with the applicable U.S.-flag shipping requirement, denying American vessels their lawful share of these American tax-payer generated cargoes and American maritime workers important job opportunities aboard these vessels. To begin to rectify this ongoing problem, and to help ensure that U.S.-flag vessels have the cargo carrying opportunities they are entitled to by law, **the Administration should issue a Directive to all Executive Branch Departments and Agencies directing them to fully comply with existing U.S.-flag cargo preference shipping requirements.**
- **Enforcement - Cargo Preference Shipping Requirements:** Any question as to the applicability of the U.S.-flag shipping requirements moving under a Federal program or financed in any way with Federal funds should be decided by the Maritime Administration. The cargo preference laws are broadly written and should be broadly applied to federally-financed programs. **Congress must encourage the Maritime Administration to immediately and more fully exercise its Congressionally- mandated authority to determine which Federal programs are in fact subject to the**

**U.S-flag cargo preference shipping requirements and to closely monitor such programs to ensure full compliance as required by law**

- **Bilateral Shipping Agreements:** The negotiation of bilateral cargo sharing agreements in conjunction with the negotiation of broader trade agreements or on its own is an important instrument for our government to use to address and respond to foreign maritime support programs – a myriad of economic, tax and subsidy programs made available to foreign flag vessels – which impede the ability of U.S.-flag vessels to compete. These foreign maritime support programs, coupled with the proliferation of state owned and controlled fleets, have led to the decline in the U.S.-flag fleet and the dangerously low percentage – a mere two percent – of global U.S. trade carried on U.S.- flag ships. Needless to say it is unrealistic at best to believe we can increase the number of vessels operating under the U.S.-flag and the number of jobs available for U.S. mariners unless there is cargo for these vessels to carry. As an essential first step, **Congress should give the Administration whatever additional authority it needs to negotiate meaningful bilateral cargo sharing agreements with America's trading partners to provide U.S.-flag vessels with a greater share of America's foreign trade.**
- **Jones Act:** The cornerstone of America's domestic maritime policy is the Jones Act. This body of law requires that vessels engaged in commerce between ports and places within the United States are owned and crewed by American citizens and built in American shipyards. According to a recent study by PricewaterhouseCoopers, the Jones Act generates 500,000 high-quality American jobs, produces an economic output in the U.S. of more than \$100 billion annually, and provides critical homeland security, economic, environmental, and safety benefits to our nation. Most importantly, the oceangoing vessels engaged in domestic commerce provide important employment opportunities for licensed and unlicensed American mariners qualified to serve on vessels needed by the Department of Defense. The full enforcement of the Jones Act is essential to ensure that vessels carrying cargo along our coasts, in our non-contiguous trades, on our rivers and on the Great Lakes are not controlled by foreign shipping interests and foreign citizen crews. **Congress and the Administration should affirm their continued support for this critically important national maritime policy.**
- **Ready Reserve Force:** The Ready Reserve Force (RRF) was set up in 1976 as an element of the Department of Defense strategic sealift to support the rapid worldwide deployment of U.S. military forces. The vessels in the RRF are primarily used to transport Army and Marine Corps unit equipment and combat support equipment during the critical surge period at the outset of hostilities, and to participate in the initial resupply to the extent necessary. The 46 vessels in the RRF provide nearly one-half of the government-owned surge sealift capability. Presently, ships in the RRF deemed to have priority readiness have Reduced Operating Status (ROS) maintenance crews of about 10 commercial merchant mariners. This is in contrast to the standard that the Military Sealift Command deems necessary for ROS vessels which generally consists of a crew complement of 13 – 15 mariners. **The Congress and Administration should take the steps necessary to enhance the operational approach for the RRF by increasing the frequency of readiness activations and by evolving to a system which includes full crews on all Ready Reserve Force vessels as well as a true 2:1 manpower ratio for each billet.** This will not only help to eliminate the current shortfall in the overall number of mariners but does so in a way that helps guarantee that the Department of Defense will have access to a sufficient number of American mariners who possess the

requisite experience, training, licensing, endorsements and government required security clearances.

- **Energy Resources on U.S.-Flag Ships:** To the extent our country moves forward with plans to export oil, liquefied natural gas and other strategic energy resources, steps should be taken to ensure that at least a portion of these commodities are transported on U.S.-flag vessels. The export of these commodities presents an opportunity for the U.S.- flag fleet to expand into export trades that are not served today by U.S.-flag vessels and U.S. citizen crews. **Congress and the Administration must undertake an immediate and thorough review to determine what must be done to encourage American jobs aboard vessels transporting oil, liquefied natural gas, and other strategic commodities and energy resources to and from the United States, and to ensure the operation of such vessels are under the United States-flag.**
- **Infrastructure Development and Maritime:** Congress and the Administration must vigorously promote the use of domestic waterborne transportation and, more specifically, the development of a national Marine Highway System, as critical components of a National Transportation Policy. As the Administration proceeds with its plans to rebuild the nation's infrastructure, it is especially important to recognize that U.S. coastal waterways are an economic resource readily available to reduce the burden of transporting cargo via roadways and rail. Among other things, **Congress must end the double taxation of domestic waterborne cargo under the Harbor Maintenance Tax (HMT) so it no longer discourages U.S.-flag vessel operations.** This discriminatory multiple taxation of waterborne cargo creates a significant economic *disincentive* for shippers to use U.S. vessels to move their cargo from one U.S. destination to another.

In conclusion, we again urge the Maritime Workforce Working Group to proceed expeditiously with its report to Congress so that Congress, the Administration and the maritime industry can begin to take the steps necessary to reverse the serious decline in the mariner workforce and



to ensure our country has the skilled and available manpower needed to meet the needs of the Department of Defense. Concerted action is necessary and we assure you that maritime labor stands ready to do whatever we can to achieve these objectives.

Sincerely,

Marshall Ainley, President  
Marine Engineers' Beneficial Association

Paul Doell, President  
American Maritime Officers

Gunnar Lundeberg, President  
Sailors' Union of the Pacific

Donald Marcus, President  
International Organization of  
Masters, Mates & Pilots

Anthony Poplawski, President  
Marine Firemen's Union

Michael Sacco, President  
Seafarers International Union

For additional information, please contact:

James Patti, President  
Maritime Institute for Research and Industrial Development  
[jpatti@miraid.org](mailto:jpatti@miraid.org)  
202-463-6505

James Caponiti, President  
American Maritime Congress  
[jcaponiti@americanmaritime.org](mailto:jcaponiti@americanmaritime.org)  
202-347-8090

## APPENDIX M – COMMENTS FROM MARINE FIREMEN’S UNION



July 28.2017

Docket Management Facility  
U.S. Department of Transportation 1200 New Jersey Avenue SE  
West Building, Room W12-140 Washington, DC 20590

RE: Docket No. MARAD 2017-0117

Dear Sirs:

The Marine Firemen's Union (MFW) is submitting the following attached letter to the above-referenced Federal Register docket. This is in response to the Maritime Workforce Working Group's (MWWG) request for input on the status of the United States merchant mariner workforce.

According to our records, as of June 30, 2017, the MFW had 440 active (as opposed to pensioner) members. At any given time, the MFW estimates that 15 percent of our membership is prohibited from shipping due to one or more reasons:

- Processing of MMC renewal or upgrade
- Processing of TWIC or passport renewal.
- Awaiting or completing STCW or MSC renewal or upgrading training.
- Medically unfit-for-duty
- Personal matters (family issues, court dates, etc.)
- Document (MMC, TWIC or passport) suspension or revocation.

Five of our active members are full-time union officials. The result is that at any given time the MFW has approximately 369 members available to work:

$[440 \text{ total mariners} - (440)(.15) \text{ mariners}] - 5 \text{ full-time officials} = 369 \text{ available mariners}$

There are 181 billets to be filled under a normal fleet deployment of contracted vessels:

<u>Rating</u>	<u>Billets</u>
Electrician/Refrigerating Engineer*	97
Pumpman/Machinist	1
Junior Engineer	24

Oiler	28
Wiper	31
Total	181

\*Includes 39 Shore Mechanic billets which by contract require USCG credentials.

The result is a ratio of 2.04 mariners per billet under normal circumstances:

$$369/181 = 2.04 \text{ mariners per billet}$$

If a full-scale breakout of all ships under contract (commercial, RRF and MSC) was ordered, the MFOW would be required to fill 253 billets:

<u>Rating</u>	<u>Billets</u>
Electrician/Refrigerating Engineer*	101
Pumpman/Machinist	1
Junior Engineer Oiler	
Oiler	30
	74
Wiper	47
Total	253

The result is a ratio of 1.46 mariners per billet under a full-scale breakout of ships:

$$369/253 = 1.46 \text{ mariners per billet}$$

While the MFOW is confident we could successfully provide the surge manpower needed for a full-scale breakout of contracted vessels in support of Department of Defense objectives, the above numbers show that a prolonged activation of vessels would strain our manpower pool.

In this light, the MFOW associates with the comments made jointly by the AMO, MEBA, MFOW, MM&P, SIU and SUP. Collectively, these organizations represent the bulk of actively sailing merchant mariners in the United States. Those comments are attached to this letter.

Sincerely,



Anthony Poplawski President/Secretary-Treasurer



July 28, 2017

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building, Room W12-140  
Washington, DC 20590

RE: Docket No. MARAD 2017-0117

Dear Sirs:

On behalf of the undersigned American maritime labor organizations, we are submitting these comments in response to the Maritime Workforce Working Group request for public input on the status of the U.S. merchant mariner workforce. Collectively, our unions represent the overwhelming majority of licensed and unlicensed American merchant mariners working aboard U.S.-flag commercial vessels engaged in all aspects of our nation's foreign and domestic shipping trades, including all 60 U.S.-flag vessels participating in the Maritime Security Program (MSP). We also represent all the civilian merchant mariners who man the U.S. Government's fleet of surge vessels, including the Maritime Administration's Ready Reserve Force (RRF) and the Military Sealift Command's Reduced Operating Status (ROS) vessels.

Our organizations are keenly aware of the shortfall in the number of U.S. citizen mariners currently available to crew the government and private vessels the Department of Defense estimates it will need under various wartime scenarios. As such, we have a direct interest in the report being prepared by the Maritime Workforce Working Group on this issue. We greatly appreciate the opportunity to present our suggestions on how to not only halt this decline in the number of available qualified American mariners but how to increase the number of vessels operating under the U.S.-flag and therefore the number of American mariners working and available.

The history of our country demonstrates that the United States needs a strong, active, militarily useful U.S.-flag merchant marine and its American citizen mariners to protect and enhance our nation's economic security and national defense. Privately-owned United States-flag vessels and their crews have always responded quickly and effectively to our nation's call, providing the commercial sealift sustainment capability and civilian maritime manpower needed by the Department of Defense to support America's military objectives around the world.

**A STRONG UNITED STATES MERCHANT MARINE IS VITAL TO OUR NATIONAL DEFENSE AND ECONOMY.**

It is important to note that beginning in 2002 with the inception of military operations in Iraq and Afghanistan, at least 98 percent of all related cargoes have been transported to the region on either U.S.-flag commercial vessels or U.S. government owned and/or controlled vessels - ***all of which have been crewed by United States citizen civilian merchant mariners.***

Most significantly, since 2009, privately-owned U.S.-flag commercial vessels and their civilian U.S. citizen crews have transported more than 90 percent of the sustainment cargo needed to support U.S. military operations and rebuilding programs in Iraq and Afghanistan. Vessels enrolled in MSP - ***all of which are crewed by United States citizen civilian merchant mariners*** - carried 99 percent of these cargoes.

However, and despite more than two hundred years of essential and patriotic service -in war and peace -the viability of our industry and its continued ability to provide this invaluable service to our country is in jeopardy. In 1960, there were 2,936 ships over 1,000 gross tons flying the American flag. Today, there are only 169 – including only approximately 80 U.S. flag ships operating in the U.S. foreign trades that carry less than two percent of all U.S. exports and imports. Compounding the serious loss in sealift capability is the concurrent reduction in the number of American licensed and unlicensed merchant mariners ready and able to crew the government and privately-owned vessels needed by the Department of Defense in time of war or international emergency.

In March 2015, General Paul Selva, Commander, United States Transportation Command, testified before the Senate Committee on Armed Services. He told the Committee: "The reduction in government impelled cargoes due to the drawdown in Afghanistan and reductions in food aid . . . are driving vessel owners to reflag to non-U.S.-flag out of economic necessity . . . With the recent vessel reductions, the mariner base is at a point where future reductions in U.S.-flag capacity puts our ability to fully activate, deploy and sustain forces at increased risk."

Similarly, at Congressional hearings held earlier this year, General Darren McDew, Commander, United States Transportation Command, and Joel Szabat, Executive Director, Maritime Administration, each warned that there is a current shortage of approximately 2,000 mariners. General McDew and Mr. Szabat have further noted that this reduced mariner pool puts our industry on the edge of being able to sustain immediate sealift requirements, and that it would not be able to meet sustained requirements beyond the first four to five months of a conflict. We agree with the conclusions reached by General McDew and Mr. Szabat

Unless this dangerous decline in American might is halted and reversed and we put American mariners back to work aboard United States-flag commercial vessels, we as a nation will soon be forced to hand over the security of the United States, along with the safety and supply of our troops deployed overseas, to foreign flag vessels and crews. This is totally unacceptable to us, and we believe it should be totally unacceptable to every American who wants to put the security of America first!

We believe it is essential that the report prepared for Congress by the Maritime Workforce Working Group focus on ways to stop the further loss of U.S.-flag vessels and the outsourcing of American maritime jobs to foreign workers. Equally important, we urge that the report contain

realistic initiatives that would increase the number of vessels operating under the U.S.-flag and increase the number of American mariners available and qualified to crew the vessels needed by the Department of Defense.

The time is now for our government to act and we urge the Maritime Workforce Working Group to include the following in its report:

**Maritime Security Program:** The Maritime Security Program and its fleet of 60 privately-owned militarily-useful United States-flag commercial vessels and their U.S. citizen crews form the basis of America's commercial sealift capability and must be maintained. As noted previously, these vessels and crews, and the worldwide intermodal and logistics networks owned and controlled by the shipping companies participating in the Maritime Security Program, are readily available to the Department of Defense whenever needed to meet the military, economic and homeland security requirements of the United States. Consequently, it is essential that Congress and the Administration make clear that they do and will consistently support the annual funding levels for this program as authorized by Congress. To do otherwise is to inject a measure of instability into the Maritime Security Program, making it extremely difficult for the vessel operators to continue to upgrade and modernize their fleets of militarily useful vessels and to continue to operate under the U.S.-flag. **Congress and the Administration should actively work to ensure that the Maritime Security Program is fully funded at the levels authorized in Public Law 114-113 (the Consolidated Appropriations Act, 2016).**

**Presidential Directive - Cargo Preference Shipping Requirements:** Federal shipper agencies and departments are required by law to comply with existing U.S.-flag shipping requirements which reserve the carriage of a percentage of U.S. government generated cargoes for U.S.-flag commercial vessels provided such vessels are available - - and are available at fair and reasonable rates. All too often, however, Federal shipper agencies and departments, intentionally or otherwise, fail to comply with the applicable U.S.-flag shipping requirement, denying American vessels their lawful share of these American tax-payer generated cargoes and American maritime workers important job opportunities aboard these vessels. To begin to rectify this ongoing problem, and to help ensure that U.S.-flag vessels have the cargo carrying opportunities they are entitled to by law, **the Administration should issue a Directive to all Executive Branch Departments and Agencies directing them to fully comply with existing U.S.-flag cargo preference shipping requirements.**

**Enforcement - Cargo Preference Shipping Requirements:** Any question as to the applicability of the U.S.-flag shipping requirements moving under a Federal program or financed in any way with Federal funds should be decided by the Maritime Administration. The cargo preference laws are broadly written and should be broadly applied to federally-financed programs. **Congress must encourage the Maritime Administration to immediately and more fully exercise its Congressionally-mandated authority to determine which Federal programs are in fact subject to the**

**U.S.-flag cargo preference shipping requirements and to closely monitor such programs to ensure full compliance as required by law**

**Bilateral Shipping Agreements:** The negotiation of bilateral cargo sharing agreements in conjunction with the negotiation of broader trade agreements or on its own is an important instrument for our government to use to address and respond to foreign maritime support programs – a myriad of economic, tax and subsidy programs made available to foreign flag vessels – which impede the ability of U.S.-flag vessels to compete. These foreign maritime support programs, coupled with the proliferation of state owned and controlled fleets, have led to the decline in the U.S.-flag fleet and the dangerously low percentage – a mere two percent – of global U.S. trade carried on U.S.- flag ships. Needless to say it is unrealistic at best to believe we can increase the number of vessels operating under the U.S.-flag and the number of jobs available for U.S. mariners unless there is cargo for these vessels to carry. As an essential first step, **Congress should give the Administration whatever additional authority it needs to negotiate meaningful bilateral cargo sharing agreements with America's trading partners to provide U.S.-flag vessels with a greater share of America's foreign trade.**

**Jones Act:** The cornerstone of America's domestic maritime policy is the Jones Act. This body of law requires that vessels engaged in commerce between ports and places within the United States are owned and crewed by American citizens and built in American shipyards. According to a recent study by PricewaterhouseCoopers, the Jones Act generates 500,000 high-quality American jobs, produces an economic output in the U.S. of more than \$100 billion annually, and provides critical homeland security, economic, environmental, and safety benefits to our nation. Most importantly, the oceangoing vessels engaged in domestic commerce provide important employment opportunities for licensed and unlicensed American mariners qualified to serve on vessels needed by the Department of Defense. The full enforcement of the Jones Act is essential to ensure that vessels carrying cargo along our coasts, in our non-contiguous trades, on our rivers and on the Great Lakes are not controlled by foreign shipping interests and foreign citizen crews. **Congress and the Administration should affirm their continued support for this critically important national maritime policy.**

**Ready Reserve Force:** The Ready Reserve Force (RRF) was set up in 1976 as an element of the Department of Defense strategic sealift to support the rapid worldwide deployment of U.S. military forces. The vessels in the RRF are primarily used to transport Army and Marine Corps unit equipment and combat support equipment during the critical surge period at the outset of hostilities, and to participate in the initial resupply to the extent necessary. The 46 vessels in the RRF provide nearly one-half of the government-owned surge sealift capability. Presently, ships in the RRF deemed to have priority readiness have Reduced Operating Status (ROS) maintenance crews of about 10 commercial merchant mariners. This is in contrast to the standard that the Military Sealift Command deems necessary for ROS vessels which generally consists of a crew complement of 13 – 15 mariners. **The Congress and Administration should take the steps necessary to enhance the operational approach for the RRF by increasing the frequency of readiness**

**activations and by evolving to a system which includes full crews on all Ready Reserve Force vessels as well as a true 2:1 manpower ratio for each billet.** This will not only help to eliminate the current shortfall in the overall number of mariners but does so in a way that helps guarantee that the Department of Defense will have access to a sufficient number of American mariners who possess the requisite experience, training, licensing, endorsements and government required security clearances.

Energy Resources on U.S-Flag Ships: To the extent our country moves forward with plans to export oil, liquefied natural gas and other strategic energy resources, steps should be taken to ensure that at least a portion of these commodities are transported on U.S.-flag vessels. The export of these commodities presents an opportunity for the U.S.- flag fleet to expand into export trades that are not served today by U.S.-flag vessels and

U.S. citizen crews. **Congress and the Administration must undertake an immediate and thorough review to determine what must be done to encourage American jobs aboard vessels transporting oil, liquefied natural gas, and other strategic commodities and energy resources to and from the United States, and to ensure the operation of such vessels are under the United States-flag.**

**Infrastructure Development and Maritime:** Congress and the Administration must vigorously promote the use of domestic waterborne transportation and, more specifically, the development of a national Marine Highway System, as critical components of a National Transportation Policy. As the Administration proceeds with its plans to rebuild the nation's infrastructure, it is especially important to recognize that

U.S. coastal waterways are an economic resource readily available to reduce the burden of transporting cargo via roadways and rail. Among other things, **Congress must end the double taxation of domestic waterborne cargo under the Harbor Maintenance Tax (HMT) so it no longer discourages U.S.-flag vessel operations.** This discriminatory multiple taxation of waterborne cargo creates a significant economic *disincentive* for shippers to use U.S. vessels to move their cargo from one U.S. destination to another.

In conclusion, we again urge the Maritime Workforce Working Group to proceed expeditiously with its report to Congress so that Congress, the Administration and the maritime industry can



begin to take the steps necessary to reverse the serious decline in the mariner workforce and to ensure our country has the skilled and available manpower needed to meet the needs of the Department of Defense. Concerted action is necessary and we assure you that maritime labor stands ready to do whatever we can to achieve these objectives.

Sincerely,

Marshall Ainley, President  
Marine Engineers' Beneficial Association

Paul Doell, President  
American Maritime Officers

Gunnar Lundeborg, President  
Sailors' Union of the Pacific

Donald Marcus, President  
International Organization of  
Masters, Mates & Pilots

Anthony Poplawski, President  
Marine Firemen's Union

Michael Sacco, President  
Seafarers International Union

For additional information, please contact:

James Patti, President  
Maritime Institute for Research and Industrial Development  
[jpatti@miraid.org](mailto:jpatti@miraid.org)  
202-463-6505

James Caponiti, President  
American Maritime Congress  
[jcaponiti@americanmaritime.org](mailto:jcaponiti@americanmaritime.org)  
202-347-8090

## APPENDIX N – COMMENTS FROM MARINE ENGINEERS' BENEFICIAL ASSOCIATION



July 28, 2017

Docket Management Facility  
U.S. Department of Transportation 1200  
New Jersey Avenue SE  
West Building, Room W12-140 Washington,  
DC 20590

RE: Docket No. MARAD 2017-0117

Dear Sirs:

On behalf of the undersigned American maritime labor organizations, we are submitting these comments in response to the Maritime Workforce Working Group request for public input on the status of the U.S. merchant mariner workforce. Collectively, our unions represent the overwhelming majority of licensed and unlicensed American merchant mariners working aboard U.S.-flag commercial vessels engaged in all aspects of our nation's foreign and domestic shipping trades, including all 60 U.S.-flag vessels participating in the Maritime Security Program (MSP). We also represent all the civilian merchant mariners who man the U.S. Government's fleet of surge vessels, including the Maritime Administration's Ready Reserve Force (RRF) and the Military Sealift Command's Reduced Operating Status (ROS) vessels.

Our organizations are keenly aware of the shortfall in the number of U.S. citizen mariners currently available to crew the government and private vessels the Department of Defense estimates it will need under various wartime scenarios. As such, we have a direct interest in the report being prepared by the Maritime Workforce Working Group on this issue. We greatly appreciate the opportunity to present our suggestions on how to not only halt this decline in the number of available qualified American mariners but how to increase the number of vessels operating under the U.S.-flag and therefore the number of American mariners working and available.

The history of our country demonstrates that the United States needs a strong, active, militarily useful U.S.-flag merchant marine and its American citizen mariners to protect and enhance our nation's economic security and national defense. Privately-owned United States-flag vessels and their crews have always responded quickly and effectively to our nation's call, providing the commercial sealift sustainment capability and civilian maritime manpower needed by the Department of Defense to support America's military objectives around the world.

**A STRONG UNITED STATES MERCHANT MARINE IS VITAL TO OUR NATIONAL DEFENSE AND ECONOMY.**



It is important to note that beginning in 2002 with the inception of military operations in Iraq and Afghanistan, at least 98 percent of all related cargoes have been transported to the region on either U.S.-flag commercial vessels or U.S. government owned and/or controlled vessels - ***- all of which have been crewed by United States citizen civilian merchant mariners.***

Most significantly, since 2009, privately-owned U.S.-flag commercial vessels and their civilian U.S. citizen crews have transported more than 90 percent of the sustainment cargo needed to support U.S. military operations and rebuilding programs in Iraq and Afghanistan. Vessels enrolled in MSP - all of which are crewed by United States citizen civilian merchant mariners - carried 99 percent of these cargoes.

However, and despite more than two hundred years of essential and patriotic service -in war and peace -the viability of our industry and its continued ability to provide this invaluable service to our country is in jeopardy. In 1960, there were 2,936 ships over 1,000 gross tons flying the American flag. Today, there are only 169 - including only approximately 80 U.S. flag ships operating in the U.S. foreign trades that carry less than two percent of all U.S. exports and imports. Compounding the serious loss in sealift capability is the concurrent reduction in the number of American licensed and unlicensed merchant mariners ready and able to crew the government and privately-owned vessels needed by the Department of Defense in time of war or international emergency.

In March 2015, General Paul Selva, Commander, United States Transportation Command, testified before the Senate Committee on Armed Services. He told the Committee: "The reduction in government impelled cargoes due to the drawdown in Afghanistan and reductions in food aid . . . are driving vessel owners to reflag to non-U.S.-flag out of economic necessity . . . With the recent vessel reductions, the mariner base is at a point where future reductions in U.S.- flag capacity puts our ability to fully activate, deploy and sustain forces at increased risk."

Similarly, at Congressional hearings held earlier this year, General Darren McDew, Commander, United States Transportation Command, and Joel Szabat, Executive Director, Maritime Administration, each warned that there is a current shortage of approximately 2,000 mariners. General McDew and Mr. Szabat have further noted that this reduced mariner pool puts our industry on the edge of being able to sustain immediate sealift requirements, and that it would not be able to meet sustained requirements beyond the first four to five months of a conflict. We agree with the conclusions reached by General McDew and Mr. Szabat

Unless this dangerous decline in American might is halted and reversed and we put American mariners back to work aboard United States-flag commercial vessels, we as a nation will soon be forced to hand over the security of the United States, along with the safety and supply of our troops deployed overseas, to foreign flag vessels and crews. This is totally unacceptable to us, and we believe it should be totally unacceptable to every American who wants to put the security of America first!

We believe it is essential that the report prepared for Congress by the Maritime Workforce Working Group focus on ways to stop the further loss of U.S.-flag vessels and the outsourcing of American maritime jobs to foreign workers. Equally important, we urge that the report contain realistic initiatives that would increase the number of vessels operating under the U.S.-flag and increase the number of American mariners available and qualified to crew the vessels needed by the Department of Defense.

The time is now for our government to act and we urge the Maritime Workforce Working Group to

include the following in its report:

- **Maritime Security Program:** The Maritime Security Program and its fleet of 60 privately-owned militarily-useful United States-flag commercial vessels and their U.S. citizen crews form the basis of America's commercial sealift capability and must be maintained. As noted previously, these vessels and crews, and the worldwide intermodal and logistics networks owned and controlled by the shipping companies participating in the Maritime Security Program, are readily available to the Department of Defense whenever needed to meet the military, economic and homeland security requirements of the United States. Consequently, it is essential that Congress and the Administration make clear that they do and will consistently support the annual funding levels for this program as authorized by Congress. To do otherwise is to inject a measure of instability into the Maritime Security Program, making it extremely difficult for the vessel operators to continue to upgrade and modernize their fleets of militarily useful vessels and to continue to operate under the U.S.-flag. **Congress and the Administration should actively work to ensure that the Maritime Security Program is fully funded at the levels authorized in Public Law 114-113 (the Consolidated Appropriations Act, 2016).**
- **Presidential Directive - Cargo Preference Shipping Requirements:** Federal shipper agencies and departments are required by law to comply with existing U.S.-flag shipping requirements which reserve the carriage of a percentage of U.S. government generated cargoes for U.S.-flag commercial vessels provided such vessels are available - - and are available at fair and reasonable rates. All too often, however, Federal shipper agencies and departments, intentionally or otherwise, fail to comply with the applicable U.S.-flag shipping requirement, denying American vessels their lawful share of these American tax-payer generated cargoes and American maritime workers important job opportunities aboard these vessels. To begin to rectify this ongoing problem, and to help ensure that U.S.-flag vessels have the cargo carrying opportunities they are entitled to by law, **the Administration should issue a Directive to all Executive Branch Departments and Agencies directing them to fully comply with existing U.S.-flag cargo preference shipping requirements.**
- **Enforcement - Cargo Preference Shipping Requirements:** Any question as to the applicability of the U.S.-flag shipping requirements moving under a Federal program or financed in any way with Federal funds should be decided by the Maritime Administration. The cargo preference laws are broadly written and should be broadly applied to federally-financed programs. **Congress must encourage the Maritime Administration to immediately and more fully exercise its Congressionally- mandated authority to determine which Federal**
  - **programs are in fact subject to the**

**U.S.-flag cargo preference shipping requirements and to closely monitor such programs to ensure full compliance as required by law**

- **Bilateral Shipping Agreements:** The negotiation of bilateral cargo sharing agreements in conjunction with the negotiation of broader trade agreements or on its own is an important instrument for our government to use to address and respond to foreign maritime support programs – a myriad of economic, tax and subsidy programs made available to foreign flag vessels – which impede the ability of U.S.-flag vessels to compete. These foreign maritime support programs, coupled with the proliferation of state owned and controlled fleets, have led to the decline in the U.S.-flag fleet and the dangerously low percentage – a mere two

percent – of global U.S. trade carried on U.S.- flag ships. Needless to say it is unrealistic at best to believe we can increase the number of vessels operating under the U.S.-flag and the number of jobs available for U.S. mariners unless there is cargo for these vessels to carry. As an essential first step, **Congress should give the Administration whatever additional authority it needs to negotiate meaningful bilateral cargo sharing agreements with America's trading partners to provide U.S.-flag vessels with a greater share of America's foreign trade.**

- **Jones Act:** The cornerstone of America's domestic maritime policy is the Jones Act. This body of law requires that vessels engaged in commerce between ports and places within the United States are owned and crewed by American citizens and built in American shipyards. According to a recent study by PricewaterhouseCoopers, the Jones Act generates 500,000 high-quality American jobs, produces an economic output in the U.S. of more than \$100 billion annually, and provides critical homeland security, economic, environmental, and safety benefits to our nation. Most importantly, the oceangoing vessels engaged in domestic commerce provide important employment opportunities for licensed and unlicensed American mariners qualified to serve on vessels needed by the Department of Defense. The full enforcement of the Jones Act is essential to ensure that vessels carrying cargo along our coasts, in our non-contiguous trades, on our rivers and on the Great Lakes are not controlled by foreign shipping interests and foreign citizen crews. **Congress and the Administration should affirm their continued support for this critically important national maritime policy.**
- **Ready Reserve Force:** The Ready Reserve Force (RRF) was set up in 1976 as an element of the Department of Defense strategic sealift to support the rapid worldwide deployment of U.S. military forces. The vessels in the RRF are primarily used to transport Army and Marine Corps unit equipment and combat support equipment during the critical surge period at the outset of hostilities, and to participate in the initial resupply to the extent necessary. The 46 vessels in the RRF provide nearly one-half of the government-owned surge sealift capability. Presently, ships in the RRF deemed to have priority readiness have Reduced Operating Status (ROS) maintenance crews of about 10 commercial merchant mariners. This is in contrast to the standard that the Military Sealift Command deems necessary for ROS vessels which generally consists of a crew complement of 13 – 15 mariners. **The Congress and Administration should take the steps necessary to enhance the operational approach for the RRF by increasing the frequency of readiness activations and by evolving to a system which includes full crews on all Ready Reserve Force vessels as well as a true 2:1 manpower ratio for each billet.** This will not only help to eliminate the current shortfall in the overall number of mariners but does so in a way that helps guarantee that the Department of Defense will have access to a sufficient number of American mariners who possess the requisite experience, training, licensing, endorsements and government required security clearances.
- **Energy Resources on U.S.-Flag Ships:** To the extent our country moves forward with plans to export oil, liquefied natural gas and other strategic energy resources, steps should be taken to ensure that at least a portion of these commodities are transported on U.S.-flag vessels. The export of these commodities presents an opportunity for the U.S.- flag fleet to expand into export trades that are not served today by U.S.-flag vessels and U.S. citizen crews. **Congress and the Administration must undertake an immediate and thorough review to determine what must be done to encourage American jobs aboard vessels transporting oil, liquefied natural gas, and other strategic commodities and energy resources to and from the United States, and to ensure the operation of such vessels are**

**under the United States-flag.**

- **Infrastructure Development and Maritime:** Congress and the Administration must vigorously promote the use of domestic waterborne transportation and, more specifically, the development of a national Marine Highway System, as critical components of a National Transportation Policy. As the Administration proceeds with its plans to rebuild the nation's infrastructure, it is especially important to recognize that U.S. coastal waterways are an economic resource readily available to reduce the burden of transporting cargo via roadways and rail. Among other things, **Congress must end the double taxation of domestic waterborne cargo under the Harbor Maintenance Tax (HMT) so it no longer discourages U.S.-flag vessel operations.** This discriminatory multiple taxation of waterborne cargo creates a significant economic *disincentive* for shippers to use U.S. vessels to move their cargo from one U.S. destination to another.

In conclusion, we again urge the Maritime Workforce Working Group to proceed expeditiously with its report to Congress so that Congress, the Administration and the maritime industry can begin to take the steps necessary to reverse the serious decline in the

mariner workforce and to ensure our country has the skilled and available manpower needed to meet the needs of the Department of Defense. Concerted action is necessary and we assure you that maritime labor stands ready to do whatever we can to achieve these objectives.

Sincerely,

Marshall Ainley, President  
Marine Engineers' Beneficial Association

Paul Doell, President  
American Maritime Officers

Gunnar Lundeberg, President  
Sailors' Union of the Pacific

Donald Marcus, President  
International Organization of  
Masters, Mates & Pilots

Anthony Poplawski, President  
Marine Firemen's Union

Michael Sacco, President  
Seafarers International Union

For additional information, please contact:

James Patti, President  
Maritime Institute for Research and Industrial Development  
[jpatti@miraid.org](mailto:jpatti@miraid.org)  
202-463-6505

James Caponiti, President  
American Maritime Congress  
[jcaponiti@americanmaritime.org](mailto:jcaponiti@americanmaritime.org)  
202-347-8090

## APPENDIX O – COMMENTS FROM SEAFARERS INTERNATIONAL UNION



AFFILIATED WITH THE SEAFARERS INTERNATIONAL UNION OF NORTH AMERICA • AFL-CIO  
**SEAFARERS INTERNATIONAL UNION**  
ATLANTIC • GULF • LAKES AND INLAND WATERS  
5201 AUTH WAY • CAMP SPRINGS, MARYLAND 20746 • (301) 899-0675

**MICHAEL SACCO**  
PRESIDENT  
**AUGUSTIN TELLEZ**  
EXECUTIVE VICE PRESIDENT  
**DAVID HEINDEL**  
SECRETARY-TREASURER  
**GEORGE TRICKER**  
VICE PRESIDENT  
**JOSEPH T. SORESI**  
VICE PRESIDENT  
**DEAN CORGEY**  
VICE PRESIDENT  
**NICHOLAS J. MARRONE**  
VICE PRESIDENT  
**TOM ORZECOWSKI**  
VICE PRESIDENT  
**KERMETT MANGRAM**  
VICE PRESIDENT  
**KATHLEEN HUNT**  
UIW NATIONAL DIRECTOR

July 28, 2017

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
West Building, Room W12-140  
Washington, D.C., 20590

RE: Docket No. MARAD 2017-0117

Dear Sirs:

The Seafarers International Union of North America ("SIU") is submitting the following attached letter in response to the above noted Federal Register docket, in response to the Maritime Workforce Working Group's ("MWWG") request for public input on the status of the United States merchant mariner workforce.

SIU associates itself with the comments made jointly by the SIU, Marine Engineers' Beneficial Association, American Maritime Officers, Sailors' Union of the Pacific, International Organization of Masters, Mates & Pilots, and the Marine Fireman's Union. Collectively, these organizations represent the bulk of actively sailing merchant mariners in the United States today. Those comments are attached to this letter.

The SIU is committed to working with the Department of Transportation and the MWWG to ensure that the United States maintains a sufficient number of merchant mariners actively sailing to meet the needs of our commercial industry and our national sealift defense requirements.

Please do not hesitate to contact me if you have any questions regarding this submission.

Sincerely,

Brian W. Schoeneman, Esq.  
Political and Legislative Director





July 28, 2017

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building, Room W12-140  
Washington, DC 20590

RE: Docket No. MARAD 2017-0117

Dear Sirs:

On behalf of the undersigned American maritime labor organizations, we are submitting these comments in response to the Maritime Workforce Working Group request for public input on the status of the U.S. merchant mariner workforce. Collectively, our unions represent the overwhelming majority of licensed and unlicensed American merchant mariners working aboard U.S.-flag commercial vessels engaged in all aspects of our nation's foreign and domestic shipping trades, including all 60 U.S.-flag vessels participating in the Maritime Security Program (MSP). We also represent all the civilian merchant mariners who man the U.S. Government's fleet of surge vessels, including the Maritime Administration's Ready Reserve Force (RRF) and the Military Sealift Command's Reduced Operating Status (ROS) vessels.

Our organizations are keenly aware of the shortfall in the number of U.S. citizen mariners currently available to crew the government and private vessels the Department of Defense estimates it will need under various wartime scenarios. As such, we have a direct interest in the report being prepared by the Maritime Workforce Working Group on this issue. We greatly appreciate the opportunity to present our suggestions on how to not only halt this decline in the number of available qualified American mariners but how to increase the number of vessels operating under the U.S.-flag and therefore the number of American mariners working and available.

The history of our country demonstrates that the United States needs a strong, active, militarily useful U.S.-flag merchant marine and its American citizen mariners to protect and enhance our nation's economic security and national defense. Privately-owned United States-flag vessels and their crews have always responded quickly and effectively to our nation's call, providing the commercial sealift sustainment capability and civilian maritime manpower needed by the Department of Defense to support America's military objectives around the world.

**A STRONG UNITED STATES MERCHANT MARINE IS VITAL TO OUR NATIONAL DEFENSE AND ECONOMY.**

It is important to note that beginning in 2002 with the inception of military operations in Iraq and Afghanistan, at least 98 percent of all related cargoes have been transported to the region on either U.S.-flag commercial vessels or U.S. government owned and/or controlled vessels - ***- all of which have been crewed by United States citizen civilian merchant mariners.***

Most significantly, since 2009, privately-owned U.S.-flag commercial vessels and their civilian U.S. citizen crews have transported more than 90 percent of the sustainment cargo needed to support U.S. military operations and rebuilding programs in Iraq and Afghanistan. Vessels enrolled in MSP ***- all of which are crewed by United States citizen civilian merchant mariners*** - carried 99 percent of these cargoes.

However, and despite more than two hundred years of essential and patriotic service -in war and peace -the viability of our industry and its continued ability to provide this invaluable service to our country is in jeopardy. In 1960, there were 2,936 ships over 1,000 gross tons flying the American flag. Today, there are only 169 – including only approximately 80 U.S. flag ships operating in the U.S. foreign trades that carry less than two percent of all U.S. exports and imports. Compounding the serious loss in sealift capability is the concurrent reduction in the number of American licensed and unlicensed merchant mariners ready and able to crew the government and privately-owned vessels needed by the Department of Defense in time of war or international emergency.

In March 2015, General Paul Selva, Commander, United States Transportation Command, testified before the Senate Committee on Armed Services. He told the Committee: "The reduction in government impelled cargoes due to the drawdown in Afghanistan and reductions in food aid . . . are driving vessel owners to reflag to non-U.S.-flag out of economic necessity . . . With the recent vessel reductions, the mariner base is at a point where future reductions in U.S.- flag capacity puts our ability to fully activate, deploy and sustain forces at increased risk."

Similarly, at Congressional hearings held earlier this year, General Darren McDew, Commander, United States Transportation Command, and Joel Szabat, Executive Director, Maritime Administration, each warned that there is a current shortage of approximately 2,000 mariners. General McDew and Mr. Szabat have further noted that this reduced mariner pool puts our industry on the edge of being able to sustain immediate sealift requirements, and that it would not be able to meet sustained requirements beyond the first four to five months of a conflict. We agree with the conclusions reached by General McDew and Mr. Szabat

Unless this dangerous decline in American might is halted and reversed and we put American mariners back to work aboard United States-flag commercial vessels, we as a nation will soon be forced to hand over the security of the United States, along with the safety and supply of our troops deployed overseas, to foreign flag vessels and crews. This is totally unacceptable to us, and we believe it should be totally unacceptable to every American who wants to put the security of America first!

We believe it is essential that the report prepared for Congress by the Maritime Workforce Working Group focus on ways to stop the further loss of U.S.-flag vessels and the outsourcing of American maritime jobs to foreign workers. Equally important, we urge that the report contain

realistic initiatives that would increase the number of vessels operating under the U.S.-flag and increase the number of American mariners available and qualified to crew the vessels needed by the Department of Defense.

The time is now for our government to act and we urge the Maritime Workforce Working Group to include the following in its report:

- **Maritime Security Program:** The Maritime Security Program and its fleet of 60 privately-owned militarily-useful United States-flag commercial vessels and their U.S. citizen crews form the basis of America's commercial sealift capability and must be maintained. As noted previously, these vessels and crews, and the worldwide intermodal and logistics networks owned and controlled by the shipping companies participating in the Maritime Security Program, are readily available to the Department of Defense whenever needed to meet the military, economic and homeland security requirements of the United States. Consequently, it is essential that Congress and the Administration make clear that they do and will consistently support the annual funding levels for this program as authorized by Congress. To do otherwise is to inject a measure of instability into the Maritime Security Program, making it extremely difficult for the vessel operators to continue to upgrade and modernize their fleets of militarily useful vessels and to continue to operate under the U.S.-flag. **Congress and the Administration should actively work to ensure that the Maritime Security Program is fully funded at the levels authorized in Public Law 114-113 (the Consolidated Appropriations Act, 2016).**
- **Presidential Directive - Cargo Preference Shipping Requirements:** Federal shipper agencies and departments are required by law to comply with existing U.S.-flag shipping requirements which reserve the carriage of a percentage of U.S. government generated cargoes for U.S.-flag commercial vessels provided such vessels are available - - and are available at fair and reasonable rates. All too often, however, Federal shipper agencies and departments, intentionally or otherwise, fail to comply with the applicable U.S.-flag shipping requirement, denying American vessels their lawful share of these American tax-payer generated cargoes and American maritime workers important job opportunities aboard these vessels. To begin to rectify this ongoing problem, and to help ensure that U.S.-flag vessels have the cargo carrying opportunities they are entitled to by law, **the Administration should issue a Directive to all Executive Branch Departments and Agencies directing them to fully comply with existing U.S.-flag cargo preference shipping requirements.**
- **Enforcement - Cargo Preference Shipping Requirements:** Any question as to the applicability of the U.S.-flag shipping requirements moving under a Federal program or financed in any way with Federal funds should be decided by the Maritime Administration. The cargo preference laws are broadly written and should be broadly applied to federally-financed programs. **Congress must encourage the Maritime Administration to immediately and more fully exercise its Congressionally- mandated authority to determine which Federal programs are in fact subject to the**

**U.S-flag cargo preference shipping requirements and to closely monitor such programs to ensure full compliance as required by law**

- **Bilateral Shipping Agreements:** The negotiation of bilateral cargo sharing agreements in conjunction with the negotiation of broader trade agreements or on its own is an important instrument for our government to use to address and respond to foreign maritime support programs – a myriad of economic, tax and subsidy programs made available to foreign flag vessels – which impede the ability of U.S.-flag vessels to compete. These foreign maritime support programs, coupled with the proliferation of state owned and controlled fleets, have led to the decline in the U.S.-flag fleet and the dangerously low percentage – a mere two percent – of global U.S. trade carried on U.S.- flag ships. Needless to say it is unrealistic at best to believe we can increase the number of vessels operating under the U.S.-flag and the number of jobs available for U.S. mariners unless there is cargo for these vessels to carry. As an essential first step, **Congress should give the Administration whatever additional authority it needs to negotiate meaningful bilateral cargo sharing agreements with America's trading partners to provide U.S.-flag vessels with a greater share of America's foreign trade.**
- **Jones Act:** The cornerstone of America's domestic maritime policy is the Jones Act. This body of law requires that vessels engaged in commerce between ports and places within the United States are owned and crewed by American citizens and built in American shipyards. According to a recent study by PricewaterhouseCoopers, the Jones Act generates 500,000 high-quality American jobs, produces an economic output in the U.S. of more than \$100 billion annually, and provides critical homeland security, economic, environmental, and safety benefits to our nation. Most importantly, the oceangoing vessels engaged in domestic commerce provide important employment opportunities for licensed and unlicensed American mariners qualified to serve on vessels needed by the Department of Defense. The full enforcement of the Jones Act is essential to ensure that vessels carrying cargo along our coasts, in our non-contiguous trades, on our rivers and on the Great Lakes are not controlled by foreign shipping interests and foreign citizen crews. **Congress and the Administration should affirm their continued support for this critically important national maritime policy.**
- **Ready Reserve Force:** The Ready Reserve Force (RRF) was set up in 1976 as an element of the Department of Defense strategic sealift to support the rapid worldwide deployment of U.S. military forces. The vessels in the RRF are primarily used to transport Army and Marine Corps unit equipment and combat support equipment during the critical surge period at the outset of hostilities, and to participate in the initial resupply to the extent necessary. The 46 vessels in the RRF provide nearly one-half of the government-owned surge sealift capability. Presently, ships in the RRF deemed to have priority readiness have Reduced Operating Status (ROS) maintenance crews of about 10 commercial merchant mariners. This is in contrast to the standard that the Military Sealift Command deems necessary for ROS vessels which generally consists of a crew complement of 13 – 15 mariners. **The Congress and Administration should take the steps necessary to enhance the operational approach for the RRF by increasing the frequency of readiness activations and by evolving to a system which includes full crews on all Ready Reserve Force vessels as well as a true 2:1 manpower ratio for each billet.** This will not only help to eliminate the current shortfall in the overall number of mariners but does so in a way that helps guarantee that the Department of Defense will have access

to a sufficient number of American mariners who possess the requisite experience, training, licensing, endorsements and government required security clearances.

- **Energy Resources on U.S-Flag Ships:** To the extent our country moves forward with plans to export oil, liquefied natural gas and other strategic energy resources, steps should be taken to ensure that at least a portion of these commodities are transported on U.S.-flag vessels. The export of these commodities presents an opportunity for the U.S.- flag fleet to expand into export trades that are not served today by U.S.-flag vessels and U.S. citizen crews. **Congress and the Administration must undertake an immediate and thorough review to determine what must be done to encourage American jobs aboard vessels transporting oil, liquefied natural gas, and other strategic commodities and energy resources to and from the United States, and to ensure the operation of such vessels are under the United States-flag.**
- **Infrastructure Development and Maritime:** Congress and the Administration must vigorously promote the use of domestic waterborne transportation and, more specifically, the development of a national Marine Highway System, as critical components of a National Transportation Policy. As the Administration proceeds with its plans to rebuild the nation's infrastructure, it is especially important to recognize that U.S. coastal waterways are an economic resource readily available to reduce the burden of transporting cargo via roadways and rail. Among other things, **Congress must end the double taxation of domestic waterborne cargo under the Harbor Maintenance Tax (HMT) so it no longer discourages U.S.-flag vessel operations.** This discriminatory multiple taxation of waterborne cargo creates a significant economic *disincentive* for shippers to use U.S. vessels to move their cargo from one U.S. destination to another.

In conclusion, we again urge the Maritime Workforce Working Group to proceed expeditiously with its report to Congress so that Congress, the Administration and the

maritime industry can begin to take the steps necessary to reverse the serious decline in the mariner workforce and to ensure our country has the skilled and available manpower needed to meet the needs of the Department of Defense. Concerted action is necessary and we assure you that maritime labor stands ready to do whatever we can to achieve these objectives.

Sincerely,

Marshall Ainley, President  
Marine Engineers' Beneficial Association

Paul Doell, President  
American Maritime Officers

Gunnar Lundeberg, President  
Sailors' Union of the Pacific

Donald Marcus, President  
International Organization of  
Masters, Mates & Pilots

Anthony Poplawski, President  
Marine Firemen's Union

Michael Sacco, President  
Seafarers International Union

For additional information, please contact:

James Patti, President  
Maritime Institute for Research and Industrial Development  
[jpatti@miraid.org](mailto:jpatti@miraid.org)  
202-463-6505

James Caponiti, President  
American Maritime Congress  
[jcaponiti@americanmaritime.org](mailto:jcaponiti@americanmaritime.org)  
202-347-8090

## APPENDIX P – COMMENTS FROM AMERICAN ROLL-ON ROLL-OFF CARRIER GROUP

**American Roll-on Roll-off Carrier Group provides the following comments in response to MARAD’s request for public input to the Maritime Workforce Working Group.**

### **Issue 1: Identifying the number of United States mariners:**

American Roll-on Roll-off Carrier (ARC) Group, including our ship owning entity Fidelio Limited Partnership owns and operates eight U.S. flag Ro-Ro ships that are enrolled in the U.S. Maritime Security Program (MSP). These vessels are also enrolled in the Voluntary Intermodal Sealift Agreement (VISA), and employ approximately 340 mariners fleet wide, through Tote Services, Inc. our ship manager.

The entire ARC fleet is actively engaged in international commerce, and ARC rotates two complete crews through each vessel. Those crew members not engaged on board are available to crew U.S. Government-owned vessel in times of need.

### **Issue 2. Assessing the impact on the United States merchant marine and the United States merchant marine Academy if graduates from State Maritime Academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States Merchant Marine:**

The “overall needs of the United States merchant marine” are inextricably linked to the national defense sealift requirements of the United States as established by USTRANSCOM//DOD. Those sealift requirements are met primarily by the U.S. flag fleet operating in international trade, which in large part consists of the 60 vessel MSP fleet.

U.S. seagoing jobs are dependent on vessels available to employ them, and the number of U.S. ships in international trade is driven by the availability of U.S. flag impelled cargo. More cargo will lead to more ships, which in turn will result in more mariners. This in turn will largely determine whether State Academy of United States Merchant Marine Academy graduates should be assigned to or required to fulfill certain positions.

In addition to the above, MARAD, the U.S. Coast and DOD should expedite the “military to mariner” program which could enable equivalently trained ex members of the U.S. military to be licensed and available in times of need.

### **Issue 3. Assessing the Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners:**

ARC believes this is a matter for the U.S. Coast Guard and MARAD.

**Issue 4. Making recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, The Coast Guard, the Navy and the Bureau of Transportation Statistics for use by the Maritime Administration for evaluating the pool of United States citizen mariners:**

ARC believes this is a matter for interagency discussion between and amongst the parties identified in the Federal Register notice.



## APPENDIX Q – COMMENTS FROM CROWLEY MARITIME CORPORATION



31 July 2017

Docket Management Facility  
Department of Transportation  
1200 New Jersey Avenue SE  
West Building Ground Floor, Room W12-140  
Washington, DC 20590-0001

Re: **Maritime Workforce Development (Docket No. MARAD-2017-0117)**

Dear Sir or Madam:

The National Defense Authorization Act 2017 required the Maritime Administration ("MARAD") to establish the Maritime Workforce Working Group under the Committee on Maritime Transportation System National Advisory Committee. The Working Group's *objective is to determine the number of qualified mariners available to work operating the nation's sealift assets during a national emergency.*

The decline in the number of U.S.-Flag deep-sea and coastwise commercial vessels over the past several decades has left the Nation with a shortage of U.S. merchant marine officers and crewmembers to staff strategic sealift vessels vital to the DoD in times of war or national emergency. While surge sealift capacity is available to the U.S. Military through two programs, Military Sealift Command's 17 surge sealift ships and MARAD's 46 Ready Reserve Force ships, the pool of active American mariners to man them for an extended period comes from the U.S.-Flag commercial fleet; i.e. licensed and credentialed mariners sailing both domestic coastal routes reserved for Jones Act vessels, and on U.S. Flag vessels trading worldwide. We would also encourage government policy makers to consider the broader need for American mariners. Meeting the requirements of the sealift vessels currently in the plan is a logical starting point. It may not be adequate, however, to meet sealift needs in more challenging scenarios (e.g., involving a contested maritime environment) that would redefine the requirement to a much higher level. The Working Group should take note of the potential consequences of planning for the minimum while allowing the continued attrition of the remainder of the American mariner workforce.

Without a sufficient cadre of credentialed officers and crewmembers to keep all 63 surge sealift ships operating simultaneously to react to a sustained war or national emergency, one of America's strategic national defense needs, moving vital equipment and supplies around the world, is in jeopardy. Just as the primary driver of the decline in mariners available to operate surge sealift vessels is the decline in the number of jobs aboard U.S.-Flag commercial ships, the primary solution to growing a healthy pool of U.S. mariners is sound Government policies that encourage a healthy growth in the number of ships, and therefore jobs, in the commercial U.S. merchant marine.

On behalf of Crowley Maritime Corporation ("Crowley"), we thank you for the opportunity to submit comments on the Maritime Workforce in response to the above-referenced docket. Crowley is a contract operating company for both MARAD and MSC of a combined twenty percent (20%) of the Government's 63 ship surge sealift tonnage. With approximately 3,000 U.S. Mariners aboard Crowley's fleet of more than 270 owned and managed vessels, Crowley believes it employs more American merchant mariners than any other company.

For individuals who are looking for employment opportunities at sea, but are new to the maritime industry or are transitioning out of one of our military's sea services, Crowley spends several million dollars annually investing in the training of our mariners, maintenance, and on upgrade of our vessels, and believes strongly in the principles of safety management systems. Throughout its 125 years, Crowley has emphasized training and professional development of mariners as well as supporting quality of life and family wage jobs.

To assist in the process, Crowley offers the following input, specifically on the four (4) issues that MARAD seeks and, additionally on possible solutions to the matters currently affecting American Maritime Workforce Development:

1. Identifying the number of United States citizen mariners. MARAD should work with the U.S. Maritime Industrial Base, the Maritime Unions, commercial vessel operators, the Navy and the Coast Guard to develop a systematic program for tracking mariner, licensing, training and qualifications. Crowley has a comprehensive computerized system for maintaining historical records for all mariners we employ. This system tracks embarkations, sea service, licensing, training and qualifications for permanent, rotary, and relief crew at all levels of employment. We would welcome the opportunity to coordinate with government and industry experts as appropriate to developing the necessary government systems.

2. The impact on the United States merchant marine and United States Merchant Marine Academy (USMMA) if graduates from State Maritime Academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine. Crowley supports the USMMA and the State maritime academies in many ways, including by providing scholarships as well as training for large numbers of cadets each year. The company also employs hundreds of USMMA and state academy graduates on an on-going basis.

We are not certain what is being proposed in this question so are not able to offer more specific comments. Crowley believes the U.S. maritime academies are generally working as intended, supporting the industry with highly trained mariner alumni. Many are placed directly into appropriate positions onboard vessels, while others are able to develop and maintain their skills in other important areas. To the extent that maritime academy graduates are not assigned to maritime positions, that is simply the result of there being fewer U.S. flag commercial vessels. Increasing the number of U.S. flag vessels will increase the number of U.S. mariner jobs.

3. The Coast Guard Merchant Mariner Licensing and Documentation System and its accessibility and value to the Maritime Administration for the purposes of evaluating the pool of United States citizen mariners: The Coast Guard Merchant Mariner Licensing and Documentation system is inherently flawed as a system to track current available mariners. The current system does not adequately distinguish active mariners from inactive mariners nor discriminate on specific endorsements, training or security clearances needed to work aboard Surge Sealift vessels and, therefore, inaccurately inflates the number of mariners who appear to be ready, willing and able to work.

4. Making recommendations to enhance the availability and quality of interagency data, including data from the United States Transportation Command, the Coast Guard, the Navy, and the Bureau of Transportation Statistics, for use by the Maritime Administration for evaluating the pool of United States citizen mariners. As a private employer, Crowley does not have access to and cannot comment on the availability and quality of interagency data in addressing MARAD's concern.

As noted, the key to meeting the serious challenges resulting from a declining maritime workforce is to increase the number of U.S. flag commercial vessels operated in domestic and international trades. This will require policy and regulatory changes at the federal level. Many proposals have been offered with that object in mind. Some would have favorable incremental impacts –for example, increasing the number of billets on certain MSC vessels; requiring certain energy exports to be shipped on U.S. flag vessels; building and deploying ice-

classed vessels for DoD.

Other proposals would have more dramatic impacts and go much further in truly resolving the issue if adopted. For example, increasing the Maritime Security Program fleet to a minimum of 100 ships would add approximately 1,700 mariners to the available mariner workforce. Contracting out operation of certain MSC vessels could also dramatically increase the number of U.S. mariner assuming continued employment of the civilian MSC employee mariners in other capacities. "Managed trade" proposals, by which a portion of imports from our trading partners would be required to move on U.S. flag vessels, could dramatically increase the U.S. flag fleet, depending on the criteria used.

It is also important to reduce or eliminate impediments to the employment of American mariners. One important example in this regard is the urgent need for improvements in obtaining necessary security clearances for the merchant mariners operating the Government's fleet of naval auxiliary ships.

We appreciate the work being done by the Workforce Working Group, and welcome the opportunity to provide additional information or

input on these comments.

A handwritten signature in dark ink, consisting of a large, stylized 'C' followed by a horizontal line.

Sincerely,  
CROWLEY MARITIME CORPORATION

## APPENDIX R – COMMENTS FROM GENERAL DYNAMICS

### GENERAL DYNAMICS

American Overseas Marine

**Christopher B. Nette**  
Vice President - Marine Operations

27 July 2017

Docket Management Facility  
U.S. Department of Transportation 1200  
New Jersey Avenue SE  
West Building Ground Floor, Room W12-140  
Washington, DC 20590-0001

Docket No. MARAD 2017-0117

The National Defense Authorization Act 2017 required the Maritime Administration to establish the Maritime Workforce Working Group under the Committee on Maritime Transportation System National Advisory Committee. The Working Group's objective is to determine the number of qualified mariners available to man the nation's sealift assets during a national emergency.

There are currently 63 Surge/RRF vessels under operational control of MARAD or MSC. These ships are maintained in various states of readiness, anywhere from five days to thirty days. They are manned with anywhere from fourteen to zero crew also depending upon the state of readiness. Upon activation these ships ramp up to crews of approximately thirty mariners. It is well known that due to the current size of the pool of qualified mariners, it is no longer possible to activate these ships simultaneously and sustain the operation over a long period of time.

There are a couple of solutions to increase the size of the pool of qualified mariners. The first is to increase the number of US Flag vessels in the Merchant Fleet. This can be accomplished in a number of ways. If the MSP program were to be expanded providing additional slots, it would entice ship owners to reflag vessels from foreign flag to US Flag. An additional solution is to require more exports to be carried on US Flag vessels, as an example Congressman Garamendi's bills H.R. 6454 and H.R. 6455 requiring up to 30% of US energy exports be carried aboard US flagged vessels. Finally, maintain or increase the funding level of the PL-480 program.

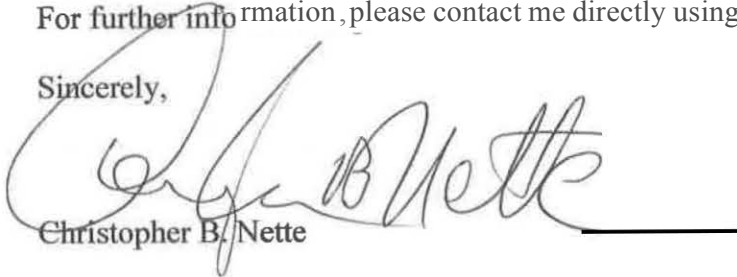
The second solution is to restructure the current ROS program. There are two potential restructuring options that would not only increase the size of the pool of mariners but also improve the readiness of the fleet. One option is to crew selected vessels that are in lesser states of readiness with small maintenance crews (less than the fourteen mariners of the vessels in higher states of readiness). This option not only increases the pool of mariners but also provides a set of key personnel that are already familiar with the vessel should it be called upon in the event of a state of nation emergency. The second option would be to remove the restriction on the vacation levels of current ROS crews from one and a half days accrued monthly to the same levels of a fully operating vessel. This change in the requirements would increase the number of mariners due to the necessity of employing two full ROS crews per vessel rotating every four months as opposed to one crew with floating

July 27, 2017  
Page 2

reliefs. This option solves not only the size of the pool of mariners but also provides key personnel that are familiar with the ship and the personnel needed for sustaining a prolonged operation.

For further information, please contact me directly using the information below.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris B. Nette", is written over a horizontal line. The signature is fluid and cursive, with the first name "Chris" and last name "Nette" clearly legible. The line extends to the right of the signature.

Christopher B. Nette

## APPENDIX S – COMMENTS FROM MAERSK LINE, LIMITED



Maersk Line, Limited  
2510 Walney Ave, Suite C  
Norfolk, VA 23513

Phone: 757.852-3219  
Fax: 757.852.3250

maersklinelimited.com

July 31, 2017

Docket Management Facility  
U.S. Department of Transportation  
1200 New Jersey Avenue SE  
West Building Ground Floor, Room W12-140  
Washington, DC 20590-0001

Docket No. MARAD 2017-0117

To Whom It May Concern:

As the largest employer of deep sea U.S. merchant mariners, Maersk Line, Limited ("MLL") shares many of the concerns stated in the submission from the Presidents of the American maritime labor organizations. In particular, MLL is concerned with the ongoing viability of the **Maritime Security Program ("MSP")**. U.S. flag carriers continue to experience rising operating costs and regulatory burdens coupled with decreasing volumes for U.S. flag-impelled cargo. These challenges were recognized and (partly) addressed by Congress in December 2015 by authorizing increased funding levels for this vital national security program; however, the increase in authorized funding is irrelevant if the appropriations for this program fall short of the authorization, or if MSP participants remain uncertain, from one year to the next, whether the U.S. Government will meet its funding obligations under this program.

The MSP program is intended to provide the U.S. Military with access to modern, militarily-useful and commercially-viable fleets and intermodal networks by requiring participants to maintain applicable vessels under U.S. Registry for ten (10) years and ensuring that these vessels remain available, anytime and anywhere, for U.S. Military use under the Voluntary Intermodal Sealift Agreement program. MLL simply asks that the U.S. Government match this commitment, and provide MSP carriers certainty and long-term stability through multiple-year appropriations necessary for planning the capital investments that will ensure the U.S. Military and the entire U.S maritime community have access to the most modern, capable, efficient and safe oceangoing vessels and global intermodal networks. For our part, MLL has made a commitment to the MSP program consisting of over a billion dollars in vessels over a ten year period, yet MLL has no assurances from the U.S. Government past the FY2017 stipend payments that expire on September 30, 2017.



Maersk Line, Limited  
2510 Walmer Ave, Suite C  
Norfolk, VA 23513

Phone: 757.852-3219  
Fax: 757.852.3250

[maersklinelimited.com](http://maersklinelimited.com)

Related to the higher U.S. flag operating costs addressed by MSP, and also mentioned in the submission from the maritime labor organizations, is the lack of effective enforcement of the cargo preference laws and regulations. It has been well documented that the MSP program, even at \$5 million per vessel per year, does not completely cover the cost differential between the operation of a U.S. and foreign flagged commercial vessel (estimated at \$6.5m-\$7.5M/vessel/year). As a result, U.S. flag carriers in international commerce rely on preference cargo to address the balance of the operating cost differential. The failure of government agencies, as well as private contractors subject to applicable Federal Acquisition Regulations, to abide by these requirements has been a continuing source of concern for U.S. flag operators, and so MLL endorses the proposals offered by the maritime unions for more effective and rigorous enforcement of the cargo preference laws through the Maritime Administration, as previously mandated by Congress. This enforcement will also likely require Presidential attention, if not further legislative action, to be effective.

In closing, we would like to emphasize that the best way to ensure a sufficient pool of U.S. citizen mariners is available to support the U.S. flag fleet in a national emergency is to ensure that there are U.S. flag vessel owners operating in international commerce that are able to hire and train these mariners on the latest and most advanced equipment and vessels. The MSP and cargo preference laws are essential in this regard, and so MLL requests, through a Maritime Workforce Working Group (MWWG) endorsement, that the U.S. Government simply honor the commitments it has made through these initiatives, and ensure that both are effective and successful in fulfilling their respective goals.

Respectfully submitted,

//signed

Patrick H. McCaffery

General Counsel

Maersk Line, Limited

## APPENDIX T - COMMENTS FROM TOTE SERVICES



31 July 2017

Docket Management Facility  
U.S. Department of  
Transportation 1200 New  
Jersey Avenue SE  
West Building Ground Floor, Room W12-140  
Washington, DC 20590-0001

Docket No. MARAD 2017-0117

Under the fiscal 2017 National Defense Authorization Act, the Maritime Administration (MARAD) is required to establish a maritime workforce study group within its Maritime Transportation System National Advisory Committee. The workforce study group's mission is to determine the number of qualified U.S. merchant mariners available to man the nation's strategic sealift assets during national security emergencies.

The unabated decline of the privately owned and operated U.S.-flag merchant fleet since Operations Desert Shield and Desert Storm in the Persian Gulf in 1990 and 1991 has resulted in an alarming shortage of U.S. merchant marine officers and crewmembers that are essential to strategic sealift. The shortage of merchant mariners places in jeopardy the ability to meet civilian manpower requirements to support a long term national security crisis that depends upon simultaneous and sustained sealift from 17 Military Sealift Command (MSC) surge sealift ships, 46 Ready Reserve Force (RRF) ships (managed by MARAD), and 63 Maritime Security Program (MSP) enrolled vessels.

MARAD has confirmed this consequence of a diminishing U.S. merchant fleet in international trade — the fleet that is the principal source of surge and reserve fleet officers and crews — in Congressional testimony several times since 2014, putting the number of qualified and available mariners most recently at 11,200. Current scenarios call for a minimum of 13,000 officers and crewmembers for initial defense shipping in a conventional war.

Gen. Darren McDew, commander of U.S. Transportation Command, has discussed this publicly many times as well, corroborating the direct, dire link between a waning U.S. merchant fleet in commercial markets and a dwindling mariner pool from which surge and reserve fleet mariners are drawn. Gen. McDew has said often that this increasing shortage of qualified U.S. merchant mariners is his single greatest source of concern.

TOTE Services Inc. is one of the largest employers of deep-sea mariners in the nation with Ready Reserve Fleet vessels, MSC vessels, commercial vessels enrolled in the Maritime Security Program,



and Jones Act commercial vessels under management. In 2016, we employed over 1000 mariners. We routinely source mariners from our commercial fleets and contractor operated MSC fleet to support activations of the RRF fleet.

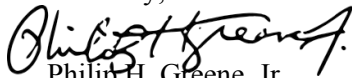
To strengthen the available cadre of merchant mariners, we recommend certain targeted policy changes that will provide the greatest impact.

- Increase the Maritime Security Fleet operating through the Maritime Security Program from 60 ships to at least 100 ships. This would add approximately 1,700 mariners to the available mariner workforce.
- Amend the Cargo Preference Act of 1954 to increase the statutory U.S.-flag share of government-generated imports and exports from 50 percent to 100 percent. This would increase the amount of cargo available to the private sector merchant fleet, boost the size of this fleet, and create new jobs for U.S. merchant mariner officers and crewmembers who would then be available to man surge and reserve sealift ships when and where necessary.
- Sustain funding of the PL-480 Title II food aid export program, which yields diplomatic dividends, meets legitimate humanitarian need abroad and keeps U.S. merchant mariners at work and available for sealift and other military support services.
- Increase the statutory U.S.-flag share of PL-480 food aid exports from 50 percent to 75 percent, the level in place from 1985 until 2011.
- Support and promote pending legislation to reserve reasonable shares of U.S. energy exports — crude oil, liquefied natural gas and coal — for U.S.-flag merchant ships.
- Military Sealift Command (MSC) should contract out vessel management services to the US private sector for at least twenty MSC vessels (AFSB, JHSV, MLPs & Prepositioned-TAKes). This would have the immediate impact of providing jobs for an additional 1,100 mariners; while also achieving operating efficiencies that save a significant sum of money for the Department of the Navy.

All of these proposals are ready for initial action immediately but will likely require phased implementation. TOTE Services is ready to work with the government and our labor partners to coordinate the expansion and training that these initiatives will need to reverse the past decades' precipitous civilian mariner decline and to rebuild the American mariner base back to its national security requirement.

The current path towards slow and steady erosion of maritime manpower creates a weak link in our national security capabilities. Rebalancing the above programs provides for the nation's economic security in peacetime and ensures our US Merchant Marine is able to answer the call in time of war.

Sincerely,



Philip H. Greene, Jr.  
Rear Admiral, USN  
(Ret.) President  
TOTE Services, Inc.

## APPENDIX U – COMMENTS FROM USMMA CLASS OF 1967

Maritime Administration

Docket No. MARAD 2017-0117 "Maritime Workforce Working Group Request for Public Input"

31 JULY 2017

Ladies/gentlemen -

The undersigned are the organizing committee for the Fiftieth Reunion of the graduating Class of 1967 from the U. S. Merchant Marine Academy. We believe your request for comments on this subject coincides with the memories that the development of our reunion has occasioned in us.

We understand that Section 3517 of the National Defense Authorization Act for Fiscal Year 2017 requires MARAD to convene a Maritime Workforce Working Group to examine and assess the size of the pool of United States citizen mariners necessary to support the United States flag fleet in times of national emergency. Further, we note issue two, 2. Assessing the impact on the United States merchant marine and United States Merchant Marine Academy if graduates from State Maritime Academies and the United States Merchant Marine Academy were assigned to, or required to fulfill, certain maritime positions based on the overall needs of the United States merchant marine.

We provide the following description of our class for your consideration as you develop your report for submission to Congress. The Class of 1967 from USMMA was required to graduate on February 10, 1967 to fill a need for officers for the many ships that were loaded and ready for transport of supplies to the Vietnam War zone. It was a feat of personal and group dedication to the needs of the nation that the Class embarked on an academic schedule that entailed over thirty hours of classroom work a week and many hours of study to prepare for the next day's events. We note this was accomplished while the class was also responsible for operating the regimental system which provided a necessary leadership experience.

Looking back on the experience of fifty years ago, two areas stand out as fundamental to the experience. First, we had from the inception of our matriculation at the USMMA, a solemn obligation to accept (if tendered) a commission in the U. S. Navy Reserve. Virtually all of the class accepted their commission which proved important as a substantial percentage of the officers serving on sealift ships had to hold Naval officer credentials. Second, we had the obligation to serve in the merchant marine for a period of at least three years. While this latter area was described as a "moral" obligation, we are pleased that the vast majority of our classmates lived that experience. Many continued on to serve the maritime industry, many rose to be CEOs of shipping companies, marine engineering firms, major shipyards and others became renowned maritime lawyers. We note the current graduates of the USMMA have a legislated obligation and we submit this obligation is a very serious one and encourage MARAD and the Department of Transportation to continue efforts to ensure that USMMA graduates fulfill their obligation. Licensed officers who have such an obligation are the only ones who can be relied on to provide the necessary entry-level manpower.

Your consideration of these comments is very much appreciated.

Sincerely,

Walter G. Kaiser (waltkaiser@optimum.net)

Robert P. Leber (leber\_rp@msn.com)

Brian D. Starer (brian.starer@squirepb.com)

Joseph J. Cox (jjc@coxmaritime.com)

*No documents available.*

## Attachments

View All (0)

## APPENDIX V – UNITED STATES TRANSPORTATION COMMAND COMMENTS

5 July 2017

USTRANSCOM's ability to meet combat force projection mobility requirements is measured against the most demanding wartime scenario. This scenario calls for activation of the entire Ready Reserve Force of 46 vessels (35 RoRo, 2 Heavy lift, 6 craneships, 1 OPDS, and 2 Aviation maintenance) and Military Sealift Command's (MSC) Surge Fleet of 15 RoRo's to provide the surge capacity required to meet the supported commander's operational timeline. Activation of the entire government-owned fleet of reserve ships translates into an initial requirement of 1,935 mariners, which is 1,312 above the 623 mariners onboard while the vessels are in a reserve status. Additionally, it is anticipated that the surge timeframe for the most demanding scenario will require crew rotations that are expected to significantly impact the ability of labor unions to supply mariners to both the activated reserve fleet and U.S. commercial fleet simultaneously.

## MEMBERSHIP

---

### Members

Merchant Mariner Personnel Advisory Committee (MERPAC) – Andrew McGovern – Chairman

Merchant Mariner Personnel Advisory Committee (MERPAC) – STAR Center Director – Gerard Pannell – Member

Committee on Marine Transportation Systems (CMTS) – Patricia Munshler – Senior Policy Advisor, USACE

### USNAVY

USNAVY CNRFC N14 - LCDR Kenneth Doyle USNR / LCDR Lindsay Conte USNR - Strategic Sealift Officer PM

USNAVY's Military Sealift Command – Christopher Thayer - Director, Contract Operated Ships PO2

USNAVY's Military Sealift Command – Andrew Kallgren – Deputy, CIVMAR Manpower & Personnel, N12X

USNAVY OPNAV N42 - LCDR Stefan Yesko

### US Coast Guard

RADM Paul Thomas, USCG/ RDML John Nadeau, USCG – Assistant Commandant for Prevention Policy

Mayte Medina – Chief for the Office of Merchant Mariner Credential / Designated Federal Officer –

Luke Harden – Chief, Mariner Credentialing Program

### Labor Representatives

American Maritime Officers – T. Christian Spain - National Assistant Vice President, Government Relations

International Organization of Masters, Mates & Pilots – Donald Marcus – President

International Organization of Masters, Mates & Pilots – Klaus Luhta – Vice President Gulf Coast & Government Affairs

Marine Engineers Beneficial Association – Marshal Ainley – President

Marine Engineers Beneficial Association – Nils Djusberg – Vice President

Marine Firemen's Union – Anthony Poplawski – President

Sailors' Union of the Pacific – Gunner Lundeberg – President

Seafarers International Union – Augustin Tellez – Executive Vice President

Seafarers International Union – Bart Rogers – Director of Manpower

### **US Merchant Marine Academy and State Academies**

California Maritime Academy – RADM Thomas A. Cropper, USN (Ret.) – President

Great Lakes Maritime Academy – CDR Scott Fairbank, USN (Ret.) - Director of Maritime Admissions

Maine Maritime Academy – Dr. David Gardner – Provost and Vice President for Academic Affairs

Massachusetts Maritime Academy – CAPT John Dooley - Assistant Director of Seagoing Professional Services

SUNY Maritime Academy – Taleen Stroud - Director of Licensing and Cadet Shipping

Texas A&M Maritime Academy – Prof. Kate Fossati

U.S. Merchant Marine Academy – Capt. Sean Tortora

### **Owner Representatives of United States Flag Fleet, Coast wise Trade**

CROWLEY - Brian Lee – Vice President Human Resources

FOSS MARITIME - Susan Haymen – Vice President, HSQE and External Affairs

NATIONAL SHIPPING OF AMERICA - Torey Presti – President

### **Owner Representatives of United States Flag Fleet, International Trade**

HAPAG LLOYD – Jared Henry- Vice President, US Government Trade

LIBERTY GLOBAL – William Campbell – Vice President of Operations

### **Additional Member Stakeholder**

US Department of Transportation, Bureau of Transportation Statistics – Michael Sprung

## Subject Matter Experts

Department of Defense – Adam T. Yearwood – Deputy Assistant Secretary of Defense – Transportation Policy

US TRANSPORTATION COMMAND (USTRANSCOM) – RADM Lawrence Jackson, USN / RDML Peter Clarke, USN – Director, Strategy, Capabilities, Policy, and Logistics

USTRANSCOM – Sealift Team – Tim Boemecke

USTRANSCOM – Sealift Team – Tim Grout

US ARMY – US ARMY TRANSPORTATION SCHOOL at Ft. Eustis – Lesa Barbour – Course Manager

Polar Tankers, Inc. / ConocoPhillips – Capt. Chris Bulera – President

Chevron – Capt. Oscar E. Prada – Senior Navigation Superintendent

## US Department of Transportation – Maritime Administration

MWWG Co-Chair - Kevin Tokarski – Associate Administrator for Strategic Sealift

MWWG Co-Chair – Dr. Shashi Kumar – Deputy Associate Administrator for Maritime Education and Training

MWWG Co-DFO – (Designated Federal Officer) – Capt. Jeffrey Flumignan - Maritime Transportation System National Advisory Committee

MARAD Staff Liaison – Paul Gilmour – Acting Director Office of Maritime Labor and Training

MARAD Staff – Doug McDonald – Director, MARAD Office of Policy and Plans

MARAD Staff – Eric Gabler – Economist MARAD Office of Policy and Plans

MARAD Staff – Tom Bryan – Economist MARAD Office of Policy and Plans

MARAD Staff – Aaron Meyers – Attorney Advisor, MARAD Office of Chief Council

MARAD Staff – Tania Adames – Transportation Analyst, MARAD office of Maritime Labor and Training









U.S. Department of Transportation  
Maritime Administration  
Office of Maritime Education and Training  
1200 New Jersey Avenue SE  
Washington, DC 20590  
9-1-800-99-MARAD