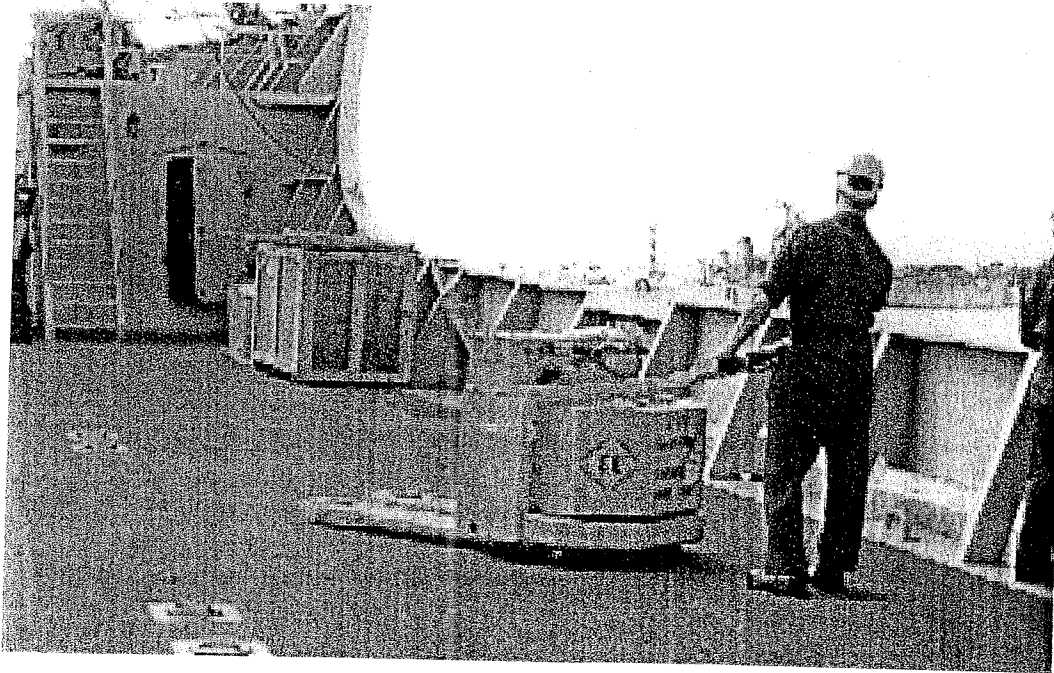


A Report to Congress

Merchant Mariner Training to Meet Sealift Requirements



**U.S. Department of Transportation
Maritime Administration
August 2004**

Executive Summary

The House Armed Services Committee included in the National Defense Authorization Act of FY 2004 (P.L. 108-136), a provision for extending the Maritime Security Program for 10 years, beginning at the expiration of the current program on September 30, 2005. In addressing other sealift-related needs, the Committee requested a report on merchant mariner personnel and training to address:

- The adequacy of training opportunities for mariners.
- The ability of student mariners to obtain necessary time at sea.
- The number of trained and qualified mariners available to serve in a national emergency.
- The number of qualified mariners projected to be available over the next five years.
- Any proposals for legislation or administrative steps that are necessary to ensure that the United States maintains an adequate number of capable and well-trained mariners to meet its future commercial and auxiliary requirements.

The U.S. deep-sea commercial fleet has declined from 1,100 ships in 1950 to approximately 200 ships today. The combination of a decline in U.S.-flag fleet size; increased mariner training requirements; and more attractive shore-side employment opportunities has led to a decrease in the number of fully qualified mariners available to crew U.S. vessels in the event of a national emergency. Additionally, there are numerous items such as crew vetting and inoculation requirements currently affecting mariner availability that did not exist during the last major activation of the government's sealift assets.

The Maritime Administration (MARAD) ensures an adequate mariner labor pool by operating the U.S. Merchant Marine Academy (USMMA) and supporting mariner training at state maritime academies and industry schools that produce approximately 1,200 fully qualified mariners each year. To address the dynamic needs of the marine industry, MARAD and these training facilities continually refine maritime training programs. For example, in 1996 the USMMA introduced a new academic major, Marine Engineering and Shipyard Management. This program integrates a six-eight week internship at a shipyard, academic studies, and the conventional at sea duty year. In the spring of 2002, this unique program was formally approved by the Accreditation Board of Engineering and Technology (ABET).

U.S. Coast Guard (USCG) data reflects that there are approximately 16,000 mariners who are fully qualified to sail the current U.S. commercial fleet and crew the government's vessels in a national emergency. Despite overall numbers that reflect adequate mariners to crew our nation's sealift assets, unlicensed mariner ranks are thin and there are potentially critical shortages in unlicensed mariner availability to support a prolonged crisis that necessitates crew rotations.

Recent events in the world required the United States to activate over 50 government owned U.S. flag ships that were part of the MARAD Ready Reserve Force (RRF) and the Military Sealift Command (MSC) fleet. These ships were crewed by very capable and well-trained merchant mariners drawn from the commercial mariner pool. By all accounts, these mariners performed exceptionally well and the United States was able to activate these ships with

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virtually no problems. However, because of the potential shortages identified above, MARAD believes that steps must be taken to ensure the availability of sufficient well-trained mariners to meet its future commercial and auxiliary requirements.

MARAD believes the potential shortfall in the unlicensed mariner pool is reaching critical proportions, and the long-term outlook for sufficient licensed personnel is also of serious concern. A number of actions would improve the merchant mariner pool by increasing the number of skilled and certified mariners available to successfully crew the Department of Defense (DOD)/RRF fleet in a timely manner. Funding implications have not yet been fully determined or requested. MARAD's proposed actions are:

1. Provide or operate platforms (training ships) for unlicensed mariner training.
2. Partner with the USCG to investigate and develop advancement opportunities for mariners serving on vessels in reduced operating status.
3. Implement additional apprenticeship programs for unlicensed mariners.
4. Vaccinate the mariner pool in advance of the next contingency.
5. Continue to screen the merchant mariner labor pool and implement other initiatives such as the transportation worker identification card (TWIC).
6. Develop a civilian mariner reserve program to ensure the availability of adequate mariners in a contingency.
7. Continue to track the number of qualified, willing and available mariners to meet our nation's crewing needs.

A Report to Congress

Merchant Mariner Training to Meet Sealift Requirements

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The Maritime Administration (MARAD) vigorously supports maritime training and education as well as mariner recruitment and employment retention programs. The agency's intent is to improve the quality of the U.S. maritime industry through an improved workforce who serve on vessels and work ashore in diverse professions, such as shipbuilding, shipping lines operations and port operations. Recent events in the world, particularly the global war on terrorism and the urgent requirements of homeland security, have required MARAD to address an array of security and training issues to enhance security and provide a safer and more efficient operation of the merchant marine of the United States.

The security threats to our Nation abroad and at home, the requirements of our Armed Forces for sealift, the unrelenting competition our commercial fleet faces in world shipping, and the importance of the marine mode of America's transportation system make this goal a high priority for the Maritime Administration.

The adequacy of current training opportunities available for licensed and unlicensed mariners

Maritime training opportunities and facilities in the United States are considered more than adequate to provide a high level of qualified current and future merchant mariners.

Licensed Mariners

Training opportunities for licensed mariners in the United States are many and varied. To ensure an adequate supply of capable and well trained licensed merchant mariners, MARAD funds and operates the U.S. Merchant Marine Academy (USMMA) and provides limited funding to six State maritime academies (California Maritime Academy, Maine Maritime Academy, Massachusetts Maritime Academy, Great Lakes Maritime Academy, State University of New York (SUNY) Maritime College, and Texas Maritime Academy).

In exchange for this financial support, the maritime academies must meet certain requirements regarding offered courses of instruction and educational standards in navigation, marine engineering, the operation and maintenance of vessels and equipment, and innovations being introduced to the merchant marine of the United States. The academies are an integral component of the defense readiness called for in our national security policy, and they guarantee a source of merchant marine officers to meet our domestic and international U.S.-flag crewing needs. In addition, the academies are a prime source of young professionals for the maritime industry infrastructure, a critical element in the mobilization of the nation's reserve fleets.

As a key component of our national security effort, all USMMA graduates and State maritime academy graduates who participate in the Student Incentive Payment (SIP) Program incur an eight year U.S. Naval Reserve commitment (unless they are accepted in another uniformed service) that obligates them to serve in time of war or national emergency. The critical maritime skills developed with their military training significantly increases our Nation's defense readiness.

The education of merchant marine officers is an essential MARAD responsibility to meet national security needs, to maintain defense readiness, and to provide the highest quality officers possible for the complex responsibilities of vessel operations and the demands of economic competitiveness in world shipping. The maritime academies meet that need by educating and training young men and women for service in the U.S. merchant marine, in the U.S. Armed Forces, and in commercial activities related to intermodal transportation.

The numbers of graduates from the Class of 2003 are:

<u>Academy</u>	<u>License Program Graduates</u>	<u>USNR/MMR^a Accessions</u>
California Maritime	59	8
Maine Maritime	70	5
Massachusetts Maritime	101	22
Great Lakes Maritime	4	0
SUNY Maritime College	89	5
Texas Maritime	23	2
USMMA	<u>200</u>	<u>110</u>
Total	546	152

The graduates of the USMMA all incur a substantial service obligation. Each graduate is required to obtain a merchant marine officer's license in order to graduate from the Academy, and must maintain the license for at least six years. All graduates must be employed in the maritime industry for five years. This requirement may be satisfied in the merchant marine as an officer aboard U.S. merchant ships, or in shoreside maritime or intermodal transportation industry positions if afloat employment is not available, and subject to the permission of the Maritime Administrator. Alternatively, active military duty in the U.S. Armed Forces or service with the National Oceanic and Atmospheric Administration also satisfies the employment obligation. In addition, all eligible graduates must be active in a reserve unit of the U.S. Armed Forces for a period of eight years. To meet the reserve unit requirement, most graduates are commissioned in the USNR/MMR program. The USNR/MMR requires two weeks' annual training for its members for a period of eight years. Currently, there are 2,581 merchant marine officers serving in the USNR/MMR.

A select number of State maritime academy students in the SIP program receive tuition assistance in exchange for a service obligation similar to that of USMMA graduates. The only difference for the SIP State maritime academy graduates is that the employment commitment is

^a U.S. Naval Reserve, Merchant Marine Reserve

three years instead of five. Again, most graduates opt for the USNR/MMR commission to fulfill their military reserve requirement.

The immediate relevance of this reserve for national security has been demonstrated and enhanced. On January 22, 2003, the Secretary of the Navy and the Maritime Administrator signed a Memorandum of Agreement for augmenting civilian crews on Ready Reserve Force (RRF) ships with members of the USNR/MMR, who have been trained in sealift support operations to ensure timely activation of the RRF in time of national need. USNR/MMR officers will be used to fill RRF officer billets only after reasonable means have been exhausted to obtain qualified civilian licensed officers from commercial sources.

To address the dynamic needs of the marine industry, the maritime academies regularly revisit their license programs and make adjustments and additions as the industry changes and as international and Federal laws and regulations merit. Current entry level training opportunities for prospective high seas licensed officers are also reviewed and refined regularly by MARAD, the U.S. Coast Guard (USCG) and other Federal agencies. An example of adding training to fill a need was evident at the USMMA in 1996. The Academy introduced a new academic major, Marine Engineering and Shipyard Management. This program integrates a six-eight week internship at a shipyard, academic studies, and the conventional at sea duty year. In the spring of 2002, this unique program was formally approved by the Accreditation Board of Engineering and Technology (ABET).

MARAD provides training vessels to all six State maritime academies for use in at-sea training and as seagoing laboratories. The vessels are part of MARAD's assistance to the academies to train highly qualified licensed officers. The Great Lakes Maritime Academy became eligible for a new training ship that was delivered in August 2002, and the Massachusetts Maritime Academy received the most recently commissioned MARAD training vessel, the training ship ENTERPRISE, in May 2003. The training vessels provide cadets the opportunity to serve on board vessels and gain practical knowledge and skills.

The following numbers reflect the normal training capacity for cadet billets on board the training vessels at the maritime academies:

Massachusetts Maritime Academy	500
Maine Maritime Academy	200
State University of New York Maritime College	682
Texas Maritime Academy	200
California Maritime Academy	275
Great Lakes Maritime Academy	30 ^b
USMMA	18 ^c
	1,905

^b The newly acquired Great Lakes training vessel, the STATE OF MICHIGAN, has funding allocated in fiscal year 2004 to build additional quarters for the cadets. When that remodeling is complete, the complement will be 80.

^c The USMMA primarily provides training aboard privately owned commercial vessels for the USMMA's entire regiment of approximately 950 midshipmen; however their vessel, the KINGS POINTER has berthing for 18 midshipmen. The State maritime academies are sized at the number of cadet billets on the respective training ships.

Unlicensed Mariners

Entry level, apprenticeship training for prospective unlicensed personnel is available at the Paul Hall Center operated by the Seafarers' International Union (SIU) in Piney Point, MD. This program, the largest of its kind, encompasses the first National Apprenticeship Standards for the maritime industry (recently developed jointly by the SIU and the Department of Labor). The Paul Hall Center has an estimated operating capacity for two programs, as follows:

Unlicensed apprenticeships	300 Students
Upgrade Training	<u>500</u> Students
Total	800 Students

The unlicensed apprenticeship program, which is nine months in duration, is currently operating at a level of approximately 150 trainees, which is less than operating capacity. New classes start each quarter. At this rate, the Center provides maritime employment for approximately 600 unlicensed apprentice mariners per year. The upgrading program, which is comprised of a variety of courses ranging from one to twelve weeks in length, is also operating at a reduced capacity. The SIU has assured MARAD that the Paul Hall Center is prepared to increase operations to full capacity, if required by a national emergency.

Additionally, in 2002, the Sailors' Union of the Pacific's Andrew Furuseth School of Seamanship developed a new mariner recruitment and training method, the "school-to-career" program. The program expands the focus of a regular high school curriculum to include maritime training that produces all of the certification necessary to enter the unlicensed ranks of the U.S. merchant marine.

Because they are embedded in and share resources with the existing educational infrastructure, such programs are sustainable, scalable, and require minimal funding support from the Maritime Administration. The programs are up and running at Mar Vista High School in Imperial Beach, California, and at Grant Union School District in Sacramento, California. In Mar Vista there are currently 80 unlicensed apprentices enrolled. Grant Union has 32 enrolled, with capacity for 150 or more. The Secretary of Transportation, the Maritime Administrator and the industry at large have endorsed the program as a 'best practice'. More importantly, the widespread replication of these programs, for which there is a road-map provided by the Pacific Coast Maritime Consortium (a group of interested West coast maritime employers and unions) presents enormous potential in meeting the national demand for seafarers, both in its active, surge, and envisioned reserve components.

Upgrade Training

Upgrade training for licensed and unlicensed personnel is available through continuing education courses at most of the maritime academies above. Upgrading and retraining courses are available for licensed and unlicensed personnel at the Paul Hall Center and for licensed officers

through maritime labor schools including the Maritime Institute of Technology and Graduate Studies (Linthicum Heights, MD) that is operated by the International Organization of Masters Mates and Pilots; the Calhoon MEBA Engineering School, (St. Michaels, MD) operated by the Marine Engineers Beneficial Association District #1; and the Simulation, Training, Assessment & Research Centers (Dania, FL and Toledo, OH) operated by the American Maritime Officers. Upgrading courses are also available at many commercially operated schools located near U.S. coasts and waterways. There are currently over 1,800 USCG-approved maritime training courses, encompassing high seas and domestic marine transportation needs, offered by over 250 training providers for licensed and unlicensed applicants and upgraders in the United States. These are listed in detail on the USCG web site at: (<http://www.uscg.mil/stcw/index.htm>). The providers are comprised of commercial and non-profit training facilities.

Due to the state-of-the-art specialized training any given mariner must have based on International, USCG, commercial or mission requirements; mariners who are not actively sailing or have not sailed in the past few years will find it difficult to maintain the numerous qualifications necessary to sail. To further strengthen the workforce quality of the U.S. merchant marine and to meet any future national security requirement, MARAD designed a new contingency measure: a special three-week course for high seas unlimited licensed deck officers who lack a current license and required certification that will qualify them for immediate deep sea employment. This new course was approved by the USCG for use in a declared national emergency. This course was approved in October 2002 as part of the preparation for Operation Enduring Freedom (OEF). The available supply of officers was sufficient for OEF, yet this special course is available when needed. Any deck officer holding an unlimited tonnage, high seas license as mate or master who completes this course in a national emergency would be issued USCG certification to sail, valid for the shorter of a period of six months or the duration of the conflict.

Additionally, in response to a recent government/industry initiative, "Maritime Careers: Creating an Action Plan for Recruiting and Retaining Mariners," MARAD recently upgraded its web site with a new feature entitled "Careers Afloat" (<http://www.marad.dot.gov/acareerafloat/index.htm>). This is an effort to facilitate the dissemination of information on employment and training opportunities in the U.S. merchant marine to prospective entrants and to actively sailing mariners.

Finally, MARAD is actively participating with the U.S. Navy's Military Sealift Command (MSC), maritime industry partners and regional and local school districts to add maritime careers and training to middle and high school programs. The Mar Vista program which was initiated in San Diego in 2002 has been particularly successful, and provides an excellent model for other schools to emulate. Nearly 30 of their pilot program graduates have taken permanent high seas jobs. Another similar project was recently started by the Philadelphia School District and is called the Maritime Academy Charter High School. The MARAD web site (<http://www.marad.dot.gov/acareerafloat/highschools.htm>) also provides information on several other schools that offer similar education programs.

Maritime Security Training

In response to Section 109 of the Maritime Transportation Security Act (MTSA) (P.L. 107-295), MARAD is partnering with the USCG to develop a national system for certifying the education and training of U.S. maritime security personnel. The July 2003, Department of Transportation report, Maritime Transportation Security Act of 2002: Section 109 Implementation, A Report to Congress, contains standards and curricula for U.S. maritime security training. The report was prepared by a working group at MARAD's USMMA. The report is available on the MARAD web site at: (<http://www.marad.dot.gov/publications/security.htm>). Internationally, MTSA Section 109 project activities led to a requirement for the development of International Maritime Organization (IMO) model courses for Ship Security Officer, Company Security Officer, and Port Facility Security Officer under the provisions of the International Ship and Port Facility Security Code. This project, undertaken by the USMMA jointly with the Government of India's Directorate General of Shipping, was completed in September 2003. The model courses have just been published by the IMO for use by training providers, carriers, and others worldwide. Additional information on these courses is available on the IMO web site (http://www.imo.org/Newsroom/mainframe.asp?topic_id=753&doc_id=2661).

Domestically, the development of a national system of certification and course approval for the education and training of U.S. maritime security personnel is being led by MARAD as part of its responsibility under Section 109 of the MTSA. Implementation of this training is underway by the steamship vessel operating companies, port facilities and other responsible parties.

The ability of student mariners to obtain the time at sea to qualify for licensing or documentation

Mariners who need sea time credit to upgrade their licenses and merchant mariner documents acquire sea time as part of their employment. Sea time is a requirement to maintain their USCG documents in a current status and for career progression. At the current time, prospective officers are able to acquire sufficient sea time on U.S.-flag vessels and on government vessels including some U.S. Navy ships that meet the USCG standards for size and tonnage.

MARAD estimates that there are presently 195 large U.S.-flag vessels that may be used for training USMMA and state maritime academy students to gain the experience required by the USCG for entry-level licenses. The USMMA has agreements for most of its midshipmen for training billets aboard these commercial ships. Assignments may also be made to 89 government-owned vessels operated by MARAD, the Navy, and the USCG.

State maritime academies also have agreements with a few U.S.-flag companies for training billets on commercial vessels. For example, Great Lakes Maritime Academy deck students sail on commercial vessels on the Great Lakes to satisfy USCG requirements for pilotage. They then receive underway training on MARAD-supported training vessels to satisfy certain IMO requirements for a high seas license and instructor-based training that is not available on commercial vessels. Also, the California Maritime Academy has an agreement with a tanker company so that their students can meet USCG requirements for selected tanker personnel that cannot be met on a training ship.

In addition to actual sea experience, the USCG has approved sea time credit for maritime academy students who successfully complete approved ship bridge simulator training.

Sea time training opportunities for unlicensed mariners are not as abundant. As stated earlier, the SIU's Paul Hall Center is currently operating at less than full capacity for training new mariners. The primary constraint on full operation is the number of billets available for training at sea. The number of billets available for unlicensed training has declined consistently for more than ten years. U.S.-flag operators have trimmed entry level unlicensed jobs. Competitive pressures from foreign flag operators who employ low wage crew members from developing countries and vessel crewing efficiencies have diminished at-sea opportunities. In addition, U.S.-flag operators participating in international commerce must compete against foreign flag operators who have significantly reduced their tax liabilities as the result of using flags of convenience, or flagging their vessels into European countries that have revised their tax structure to include a tonnage tax regime (flat tax). Thus, entry level ordinary seaman, wiper, and food handler opportunities are now very limited on U.S.-flag cargo vessels, except where sea time at the entry level is a part of training programs such as the SIU unlicensed apprenticeship program at the Paul Hall Center in Piney Point, MD. Entry-level or apprentice positions created through MARAD's support keep career paths open to higher unlicensed ratings. Significant questions will remain regarding the ability of the unlicensed schools to "ramp up" the production of unlicensed mariners in the event of a contingency.

Finally, pursuant to SEC. 1308 (b) of the Merchant Marine Act, MARAD also provides assistance by donating excess vessels and equipment to non-profit maritime training institutions that have Coast Guard approved courses. Since 1982, MARAD has donated over 90 vessels to the USMMA, the state maritime academies and private, non-profit maritime training institutions for use in maritime training programs. In addition, innumerable items of equipment such as motors, lifeboat davits, steam turbine engines and other items required for maritime training have been donated to qualifying institutions.

The number of trained and qualified mariners available to serve on reserve vessels in time of war or national emergency

By all accounts, America's merchant mariners answered the call in exemplary fashion during Operations Enduring Freedom and Iraqi Freedom (OEF/OIF), as they did during Operations Desert Shield/Desert Storm. More than 7,500 merchant mariners served in OIF and were awarded the U.S. Merchant Marine Expeditionary Medal for their efforts on behalf of their country. Despite enhanced crew vetting procedures and the requirement for inoculations and other force protection measures for merchant mariners, not a single ship was tendered to DOD late as a result of crewing issues.

However, the entire surge fleet was not activated and no wholesale crew rotations were required. Therefore, the demand for able merchant mariners is not completely predictable, and there remains uncertainty regarding the ability of the maritime industry and its maritime labor unions to produce an adequate number of fully trained and qualified mariners to fulfill future demands should there be a full activation of all MSC and MARAD surge vessels for a prolonged period. Maritime labor unions have excelled in the past in producing mariners when needed and they

will continue to support these additional surge requirements.^d However, unions cannot sustain membership to support contingency requirements, nor can commercial companies afford to employ personnel simply for this purpose. Meeting contingency crewing requirements of the surge vessels, as well as all U.S.-flag vessels, is dependent on the personnel base generated by jobs at sea. Although U.S. merchant mariners have repeatedly demonstrated an exemplary willingness to serve and sacrifice when called upon, sealift crewing is still a voluntary employment system that is dependent upon the *willingness* and *availability* of mariners to sail. There is no *guarantee* that sufficient mariners will be readily available to provide critical sealift crewing, particularly in the future if maritime industry jobs continue to decline. MARAD addresses the supply and skill issues for merchant mariners through various programs.

Last year, MARAD, in collaboration with MSC, USTRANSCOM, the USCG, and the maritime industry, initiated an effort to revalidate and compare the peace/war time requirements with mariner qualifications and availability to identify potential shortfalls. The goal of this initiative is to reach consensus on whether there are sufficient qualified mariners who are available to fulfill both peacetime and contingency requirements. It will also provide the analysis necessary to devise logical and effective solutions to help guarantee sufficient mariners, and to justify funding for these solutions.

DOD depends upon a reserve fleet of ships to provide surge sealift capacity to meet contingency requirements as specified in the Mobility Requirements Study 2005 (MRS-05) dated December 15, 2000. There are currently 87 surge ships that are maintained at varying levels of readiness. Ships designated in the highest readiness levels (4 and 5 day response) are kept in reduced operating status (ROS) with permanent partial crews who help maintain the ships in a high state of readiness. In addition to these "surge" vessels, MSC currently has five Naval Fleet Auxiliary Force (NFAF) ships (two hospital ships, one tanker, and two ammunition ships) that are normally in ROS status during peacetime, but may be called upon at any time based on emergent requirements. Activation and prolonged operation of all surge sealift vessels would require more than 4,300 additional mariners beyond the requirements of the commercial fleet.

There are more than 26,400 U.S. merchant mariners who meet STCW95 qualification standards for deep sea service.^e Of these, 16,900 have sailed within the past two years and comprise the "currently sailing" workforce.^f That leaves a pool of 9,500 qualified mariners that can offset the requirement for approximately 5,000 mariners to activate and crew the DOD/RRF sealift for a sustained period. Since all of these mariners will not be available to sail in response to government fleet requirements, a lesser number is actually available from the mariner pool. Based on MARAD surveys regarding mariners' willingness to sail, MARAD estimates the total

^d "Surge fleet" refers to the 68 vessels maintained in the Ready Reserve Force at varying levels of readiness and 19 ships maintained by the MSC that are activated and used for the initial sealift required in a contingency.

^e STCW95 refers to "Standards for Training, Certification and Watchkeeping", an IMO convention, initially signed in 1995 and implemented in 2001. It prescribes specific training for merchant mariners and requires that proficiency in designated competencies be demonstrated in order for mariners to be certified as compliant with this new international standard. Examples include basic safety and fire fighting training for all mariners and a course in bridge resource management for deck officers. All documented U.S. mariners must now meet these new standards.

^f Estimated because sea service on government vessels is not required to be reported to the Coast Guard.

pool of available mariners to be approximately 105 percent of the requirement. MARAD's estimate does not take into consideration the possible impact on the mariner pool, if an attack resulted in casualties.

Despite projections that reflect adequate mariners to crew our nation's sealift assets, unlicensed mariner ranks are thin and there are potentially critical shortages in unlicensed mariner availability to support a prolonged crisis that necessitates crew rotations. DOD has traditionally relied upon the commercial mariner pool to provide sufficient numbers of qualified mariners to fulfill these additional requirements. However, since Desert Shield/Desert Storm, concern has existed as to whether sufficient qualified mariners will be available, especially during a large, short notice activation of these vessels.

An assessment of the number of qualified mariners projected to be available over the next five years

Today's mariner is required to undergo extensive specialized training to meet standards imposed by the IMO and employer's requirements due to the greatly increased complexity of operational tasks and equipment. During a contingency, the mariner must meet specialized mission requirements, such as force protection training and inoculation against biotoxins. These requirements for specialized mariner training dictate that mariners cannot be used interchangeably to meet the crewing needs of the organic fleet.^g An assessment of the availability of mariners for the future must include an examination of not only the total mariner requirement, but it must also address the specific qualifications breakdown by license/rating. The IMO's STCW95 prescribes the demonstration of proficiency in specified competencies in order to remain qualified. These competencies vary by license or rating. As a result, many mariners who do not have recent sailing experience or training are no longer qualified for service in the mariner pool.

There are numerous dynamic factors that affect a given mariner's availability to go to sea. In an effort to establish the current availability of a skilled and certified merchant mariner professional pool, MARAD conducted surveys in 2001 and 2002. The results of those surveys were used to estimate the percentage of merchant mariners who were available to sail in a contingency^h. Surge sealift crews are comprised of volunteer mariners who either come out of retirement, or temporarily leave shore side positions to support contingencies. Currently programs such as reemployment rights and war zone bonuses help to encourage mariners to sail during a contingency, but without the existence of a civilian reserve which creates a commitment for mariners to sail in support of an activation of DOD surge vessels, it is difficult to predict the number of mariners that will be available at any given time. The decline in U.S.-flag fleet size, increased training requirements, and more attractive shore-side employment have led to a decrease in the number of fully qualified mariners. Additionally, there are numerous items such as crew vetting and inoculation requirements currently affecting mariner availability that either did not exist or were not predominant factors during the last contingency requiring a major

^g Refers to the fleet of government-owned commercial-type vessels that can be activated and used for sealift in a contingency

^h 73 percent of the unlicensed mariners and 77 percent of the licensed mariners responding to the survey indicated a willingness to serve on government vessels in the event of a national emergency.

activation of the surge assets. For example, the requirement for vaccinations had a significant impact on some mariners' availability during OIF. Less than one percent of the mariners were unwilling to be vaccinated, and nearly 8 percent of the mariners reporting for duty could not be vaccinated for medical reasons. This rate compared favorably with the disqualification rate experienced by the U.S. Armed Forces.

Absent significant growth in the U.S.-flag commercial fleet, (or changes in maritime employment practices that would increase the number of mariners working in existing jobs), the pool of merchant mariners available to support our nation's defense needs will continue to contract because of the factors identified above. Increased security and STCW95 training requirements that require periodic sailing to demonstrate specified competencies will continue to constrain the merchant mariner pool for the future. In addition, it is becoming clear that retirements and the development of alternative employment opportunities are significant factors in further diminishing employment/training opportunities in the merchant mariner labor pool. Therefore, it is most important that the continued replication of Mar Vista-type unlicensed apprenticeship programs remain as counter-balances to offset some factors which are draining the pool of merchant mariner personnel.

Any proposals for legislation or administrative steps that the Secretary considers necessary, to ensure that the United States maintains an adequate number of capable and well-trained mariners to meet its future commercial and auxiliary requirements

MARAD believes the potential shortfall in the unlicensed mariner pool is reaching critical proportions, and the long-term outlook for sufficient licensed personnel is also of serious concern. A number of actions would improve the merchant mariner pool by increasing the number of skilled and certified mariners available to successfully crew the DOD/RRF fleet in a timely manner. Funding implications have not yet been fully determined or requested. The proposed actions are as follows:

1. Provide or operate platforms (training ships) for unlicensed mariner training. At present the Paul Hall Center at Piney Point is operating at less than full capacity because of the limited number of available training platforms to provide required sea time. Similarly, a limited number of training platforms are available for apprenticeship programs in operation on the West Coast. Unlicensed mariners are currently in short supply, and they would be the area of greatest potential shortfall in the event of a protracted contingency. Providing training billets for unlicensed mariners on a training ship would allow unlicensed mariner unions to double the annual output of entry level mariners as well as to significantly increase the number of unlicensed mariners upgrading their merchant mariner documents. These additional entry level unlicensed mariners will enable existing mariners who are working extended rotations to obtain more timely relief.
2. Partner with the US Coast Guard (USCG) to investigate and develop advancement opportunities for mariners serving on ROS vessels. At present, limited sea time credit is available to mariners working in the deck department of ROS vessels. The value of ROS crews was well proven during OEF/OIF. Current sea time crediting practices limit advancement opportunities for ROS deck crew members by allowing them credit for only

one day in three days served, up to a maximum of 180 days. This practice delays mariner upgrades and decreases the qualification level of the mariner pool.

3. Implement additional apprenticeship programs for unlicensed mariners. This initiative could be undertaken by both government and industry partners to provide support and resources for the establishment of apprentice programs within local educational and governmental organizations. Assuming resolution of sea time credit issues, this program could facilitate the use of Government ships in ROS status as potential training vessels. Apprenticeship program success will be gauged on how many successful programs can be established around the country, by the number of students that are applying for admittance in the program, and the number of students employed upon graduation from the program. Partnering with the U.S. Department of Labor, which currently oversees apprenticeship programs, would minimize incremental costs.
4. Initiate vaccination of the mariner pool in advance of the next contingency so as to minimize the loss of mariners due to their unwillingness or inability to take required inoculations. Although vaccine supply and distribution and vaccination administration are issues to be addressed, the result of vaccinating mariners in advance (and following up on mariners who have already been vaccinated) will be an easily identifiable supply of medically qualified mariners to meet our nation's contingency needs.
5. Continue to protect the merchant mariner labor pool from infiltration by criminals and potential terrorist threats through enhanced screening against law enforcement databases and by implementing initiatives such as the transportation worker identification card (TWIC). After the events of September 11, 2001, the Coast Guard imposed more stringent mariner safety and security screening and evaluation standards as a part of the merchant mariner documentation process in an effort to ensure the safety of mariners and the maritime transportation system. Most of the existing merchant mariner labor pool has been screened and approved using these new standards. New entrants must continue to be screened upon entry, and existing mariners must continue to be screened at the time of routine licensing transactions. All mariners should be required to carry identification that deters fraud and is resistant to counterfeiting.
6. Develop a civilian mariner reserve organization comprised of qualified mariners obligated to serve in the event of a contingency and who are trained in the operation of government ships. A reserve, developed and administered by MARAD, 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 in the mariner labor pool. Although the USNR/MMR program is a potential source for entry-level licensed mariners, it does not contain the higher level licensed and unlicensed mariners necessary to meet crewing needs for surge vessels. A civilian reserve would provide assured access to mariners with the specific skills needed for activation and operation of Government vessels. At present the area of greatest need is unlicensed mariners. Detailed resource requirements have not been addressed, pending an update of mariner requirements to be completed in FY 2004. Costs would vary depending upon decisions regarding the size and composition of the reserve as well as inducements offered to join the reserve.

7. MARAD will continue to work with USTRANSCOM, MSC, the Coast Guard and the maritime industry to revalidate mariner requirements and to track the number of qualified, willing and available mariners to meet our nation's crewing needs.

