

Merchant Mariner Credentialing: Coast Guard Performance Measures Could Better Address Mariners' Needs

GAO-23-106629

Report to Congressional Committees

July 26, 2023

Why This Matters

Merchant mariners play a vital role supporting the U.S. maritime commerce industry which, according to industry estimates, generates nearly \$5.4 trillion in economic activity annually. Merchant mariners also can support national defense efforts by providing ships and mariners to the U.S. military in times of national emergency or war.

Merchant mariners are civilian employees who work on a variety of public and privately-owned U.S. registered merchant, towing, and passenger vessels. Vessel owners hire merchant mariners for a variety of positions, each with different levels of skill and qualification requirements, such as deck officers, engineers, medical personnel, or stewards (e.g., food services).

Mariners must possess a merchant mariner credential that indicates the holder meets the qualifications necessary for the mariner's position. The U.S. Coast Guard's National Maritime Center, within the Department of Homeland Security, has responsibility for issuing credentials to qualified mariners. However, over the past several years, questions have been raised about the time it takes and the technology used to process credential applications.

The James M. Inhofe National Defense Authorization Act, 2023, includes a provision for us to evaluate how the National Maritime Center processes merchant mariner credentials.¹ This report addresses the Coast Guard's merchant mariner credentialing process, the volume and timeliness of processing applications, and how the Coast Guard measures the performance of its process.

Key Takeaways

- The Coast Guard merchant mariner credentialing process includes multiple levels of review, and may include reviews for completeness and suitability, and to ensure the mariner meets the professional qualifications for the position.
- For credential applications received from January 2018 through June 2022, the Coast Guard processed about 75 percent of them in 60 days or fewer.
- The Coast Guard's processing times can vary due to the complexity or completeness of the application, the number of applications received, and the availability of the Coast Guard's human capital and information technology resources, according to our review of application data and interviews with Coast Guard officials. For example, from January 2018 through December 2022, the Coast Guard determined 57 percent of the applications it received were incomplete and required additional information to be submitted.
- Over the past several years, the Coast Guard has taken steps to improve the credentialing process by, for example, streamlining part of its review process.

The Coast Guard is also taking steps to modernize its information technology to help improve its overall timeliness in processing credentials and responding to mariners.

- The Coast Guard's key performance measures help partially support one of its Marine Safety strategic goals of improving service to mariners, the maritime community, and the public. However, the Coast Guard does not measure the performance of its overall processing time. Adding a measure and using it to track performance of its overall credentialing processing time could help ensure the Coast Guard remains responsive to mariners' needs.

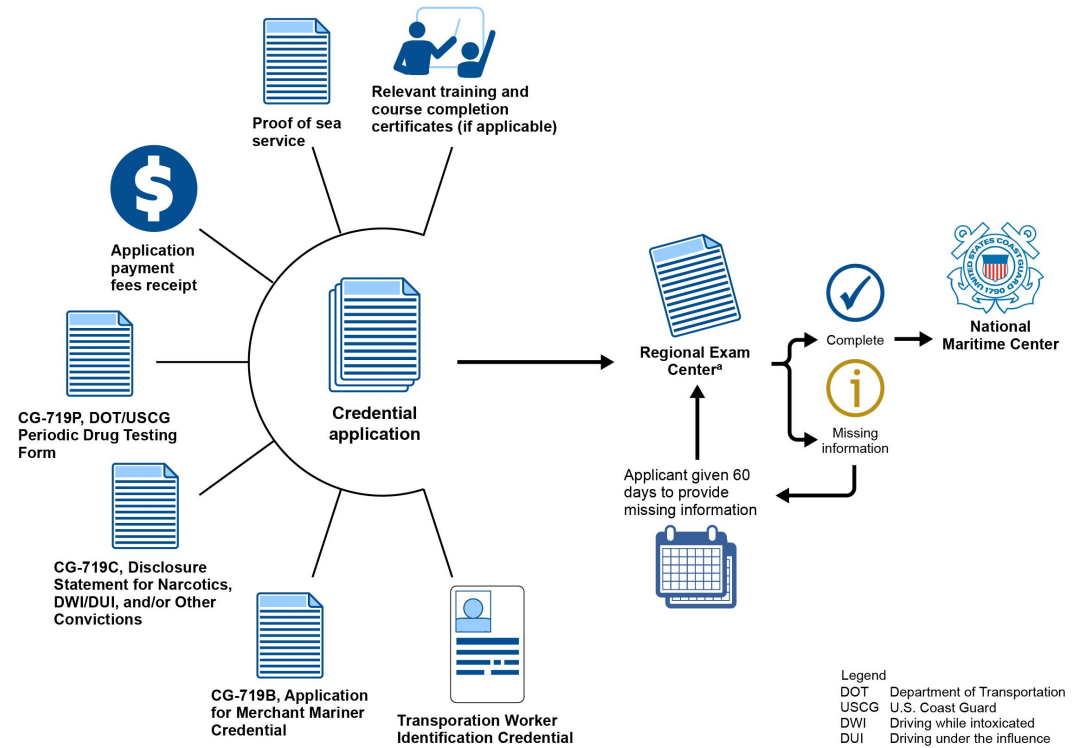
How do merchant mariners apply for credentials?

A merchant mariner applies for credentials by submitting an application and supporting documentation to one of the Coast Guard's 17 regional examination centers, two monitoring units, or directly to the National Maritime Center.²

A mariner may request a credential for the first time (original), renewal, duplicate, raise of grade (i.e., change in position), new endorsement (i.e., proof of qualification for a position) on a previously issued credential, or a combination of two or more of these scenarios.³ In addition to the application form, mariners also need to submit identification information, a processing fee, drug test results, and proof of their Transportation Worker Identification Credential—a document issued by the Transportation Security Administration.⁴

Mariners may submit applications by email, mail, fax, or in-person. A reviewer then assesses the application to determine if it has the basic required elements. According to Coast Guard officials, reviewers have 5 days to complete manual data entry of the application information into the Merchant Mariner Licensing and Documentation system—the database the Coast Guard uses to track applications. If an application is missing one or more of the required documents, forms, or signatures, then the regional examination center, monitoring unit, or National Maritime Center will notify the mariner by email or mail with a request for the missing information. Figure 1 shows the basic elements of the application and where to submit them.

Figure 1: Basic Elements of the Merchant Mariner Credential Application and Where to Submit Them



Text of Figure 1: Basic Elements of the Merchant Mariner Credential Application and Where to Submit Them

- 1) Basic elements of the Merchant Mariner Credential Application
 - a) Relevant training and course completion certificates (if applicable)
 - b) Proof of sea service
 - c) Application payment fees receipt
 - d) CG-719P, DOT/USCG Periodic Drug Testing Form
 - e) CG-719C, Disclosure Statement for Narcotics, DWI/DUI, and / or other convictions
 - f) CG-719B, Application for Merchant Mariner Credential
 - g) Transportation Worker Identification Credential
- 2) Applicant given 60 days to provide missing information
- 3) Regional Exam /a/
 - a) Exam Complete
 - b) Processing to National Maritime Center

- 4) if any information is missing, applicant given 60 days to provide missing information

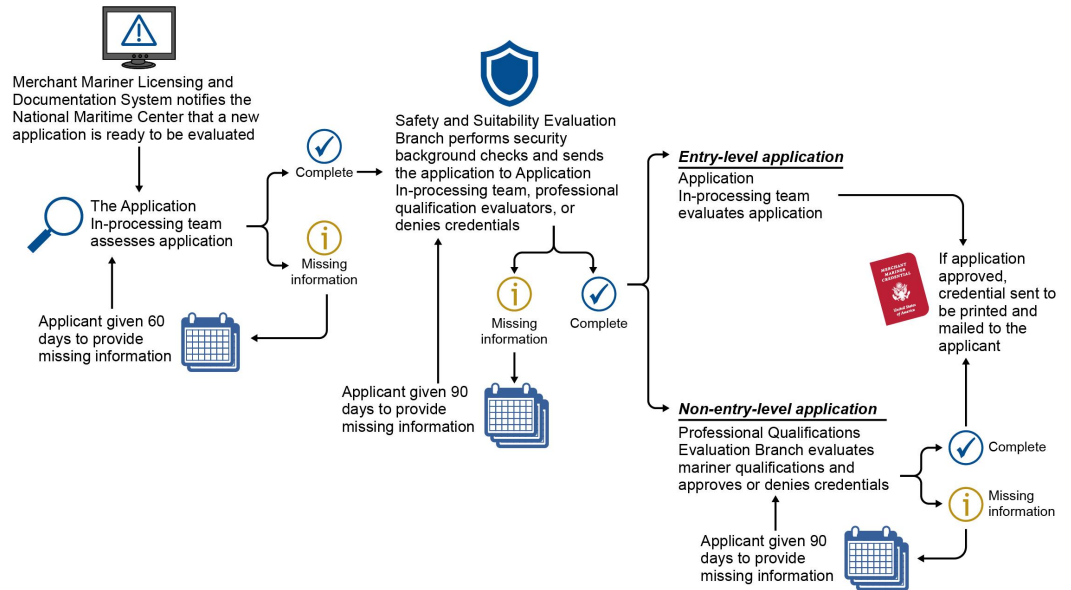
Source: GAO analysis of Coast Guard merchant mariner credentialing information; GAO (illustrations); U.S. Coast Guard (logo). | GAO-23-106629

^aMariners may also submit applications to two monitoring units or directly to the National Maritime Center.

How does the National Maritime Center process applications?

The Coast Guard processes applications by conducting multiple reviews for completeness and suitability, and to ensure the mariner meets the professional qualifications for the position (see fig. 2).⁵

Figure 2: The Coast Guard Merchant Mariner Credentialing Process



Source: GAO analysis of Coast Guard merchant mariner credentialing information; GAO (illustrations). | GAO-23-106629

Text of Figure 2: The Coast Guard Merchant Mariner Credentialing Process

- 1) Merchant Mariner Licensing and Documentation System notifies the National Maritime Center that a new application is ready to be evaluated
- 2) The Application In-processing team assesses application
 - a) Applicant given 60 days to provide missing information
- 3) When application complete. Safety and Suitability Evaluation Branch performs security background checks and sends the application to Application In-processing team, professional qualification evaluators, or denies credentials
 - a) Applicant given 90 days to provide missing information
- 4) After SSUB applications path diverges.
 - a) Entry-level application. Application. In-processing team evaluates application
 - b) If application approved, credential sent to be printed and mailed to applicant.

- 5) Non-entry level application. Professional Qualifications Evaluation Branch evaluates mariner qualifications and approves or denies credentials.
 - a) Applicant given 90 days to provide missing information
 - b) When complete, application approved, credential sent to be printed and mailed to applicant.

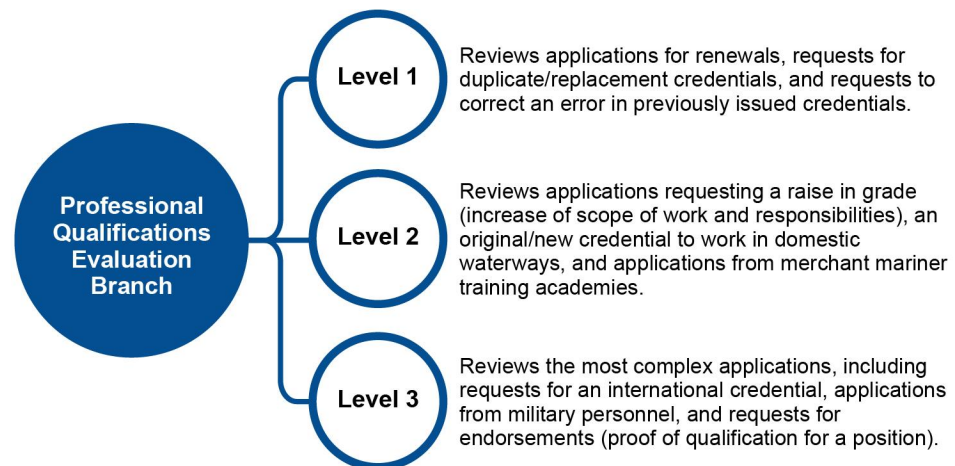
Source: GAO analysis of Coast Guard merchant mariner credentialing information; GAO (illustrations). | GAO-23-106629

Because applications vary in type and complexity, the Coast Guard sorts and distributes applications to different types of reviewers. For example, applications for entry-level positions, such as ordinary seamen, wipers, and stewards, are generally less complex and may not require as much documentation. Reviewers in the application intake office assess entry-level applications. However, applicants with a military background may submit more complex documentation and require an assessment by a more highly trained reviewer.

Depending on the number or type of credentials sought and the complexity of each, additional documents and review may be required. Applicants requesting an international credential, for example, which would permit them to work in international waters, may need to submit additional endorsements and documents.⁶ Mariners are typically given 60 to 90 days to submit missing or additional information, depending on where their applications are in the review.⁷

The Coast Guard sends all non-entry level applications to the Professional Qualifications Evaluation Branch and assigns an evaluator based on the application’s level of complexity, as described in figure 3.

Figure 3: Types of Merchant Mariner Applications Reviewed by Professional Qualifications Evaluators



Source: GAO analysis of Coast Guard merchant mariner credentialing information. | GAO-23-106629

Text of Figure 3: Types of Merchant Mariner Applications Reviewed by Professional Qualifications Evaluators

- Professional Qualifications Evaluation Branch
- Level 1: Reviews applications for renewals, requests for duplicate/replacement credentials, and requests to correct an error in previously issued credentials.

- Level 2: Reviews applications requesting a raise in grade (increase of scope of work and responsibilities), an original/new credential to work in domestic waterways, and applications from merchant mariner training academies.
- Reviews the most complex applications, including requests for an international credential, applications from military personnel, and requests for endorsements (proof of qualification for a position).

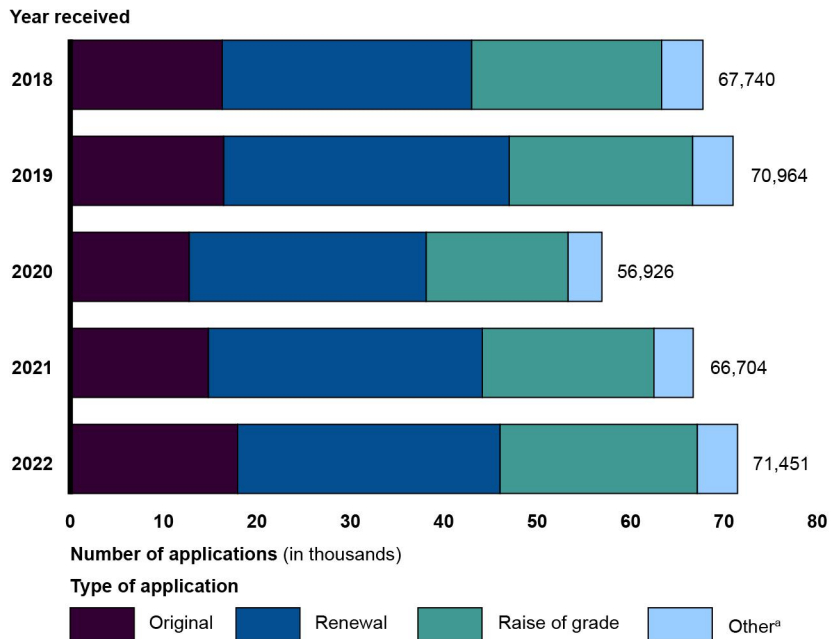
Source: GAO analysis of Coast Guard merchant mariner credentialing information. | GAO-23-106629

How many applications for credentials has the Coast Guard received in the past 5 years?

The Coast Guard received 333,785 total applications for mariner credentials from January 2018 through December 2022. These included applications for renewals (42 percent), raises of grade (28 percent), and original credentials (23 percent). The Coast Guard also received applications for domestic/continuity credentials (indicating eligibility to renew) and applications for duplicate credentials, which each made up about 3 percent of the total.⁸

Annual application volume varied little during this time period, with the exception of a notable decrease in total applications in 2020. As shown in figure 4, the volume of all types of credentials also remained consistent during this time period and experienced the same decrease in 2020 during the onset of the COVID-19 pandemic. Application volume had largely returned to pre-pandemic levels as of December 2022.

Figure 4: Numbers of Credential Applications Received, by Type, from January 2018 through December 2022



Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Data table for Figure 4: Numbers of Credential Applications Received, by Type, from January 2018 through December 2022

Fiscal year	Original	Renewal	Raises of grade	Other	Total
2018	16276	26694	20349	4421	67740
2019	16438	30559	19640	4327	70964
2020	12731	25376	15182	3637	56926

Fiscal year	Original	Renewal	Raises of grade	Other	Total
2021	14792	29331	18380	4201	66704
2022	17926	28077	21125	4323	71451

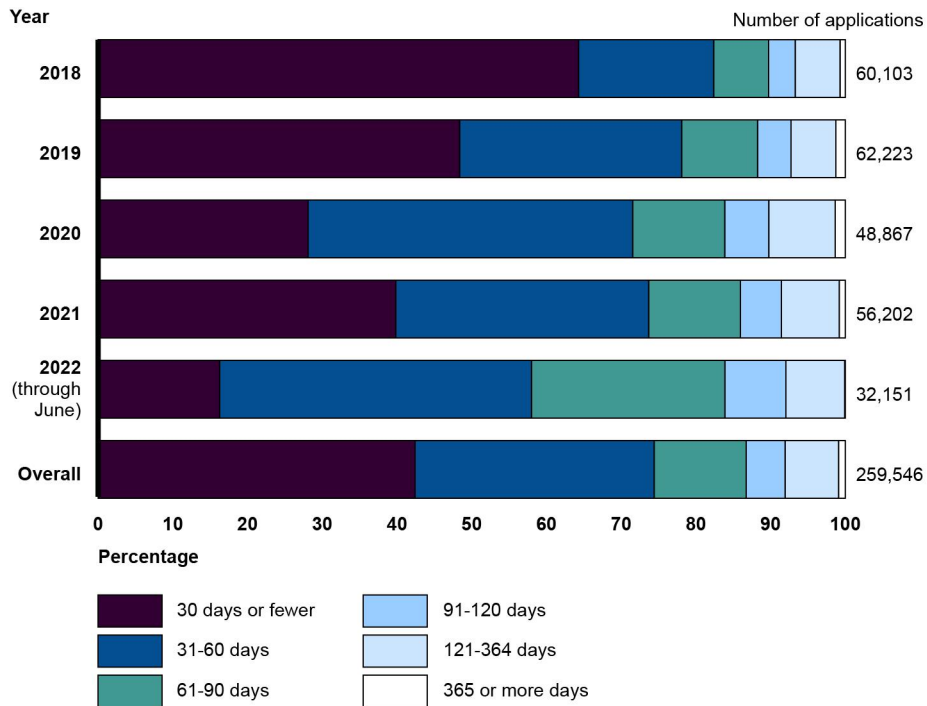
Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

^a“Other” includes duplicate and domestic/continuity credential applications.

How long did it take to process credential applications?

For credential applications received from January 2018 through June 2022, the average overall processing time was 52 days from the time the National Maritime Center received an application to the time it printed the credentials. During this time period, the Coast Guard processed about 75 percent of applications in 60 days or fewer.⁹ The Coast Guard processed an average of 42 percent of issued credentials in 30 days or fewer and around 1 percent took more than 1 year. Figure 5 shows processing times in more detail.

Figure 5: Percentage of Coast Guard Merchant Mariner Credentials Issued by Overall Processing Time, in Days, for Applications Received from January 2018 through June 2022



Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Data table for Figure 5: Percentage of Coast Guard Merchant Mariner Credentials Issued by Overall Processing Time, in Days, for Applications Received from January 2018 through June 2022

Year	30 days or less	31 - 60 days	61 - 90 days	91 - 120 days	121 - 364 days	365+ days or more	Total number of applications
2018	64.3%	18.1%	7.3%	3.6%	6.0%	0.7%	60103
2019	48.4%	29.7%	10.2%	4.5%	6.0%	1.3%	62223
2020	28.1%	43.4%	12.3%	5.9%	8.9%	1.4%	48867
2021	39.9%	33.8%	12.3%	5.5%	7.7%	0.8%	56202
2022 (through June)	16.3%	41.8%	25.9%	8.2%	7.9%	0.1%	32151

Year	30 days or less	31 - 60 days	61 - 90 days	91 - 120 days	121 - 364 days	365+ days or more	Total number of applications
Overall	42.4%	32.0%	12.3%	5.2%	7.2%	0.9%	259546

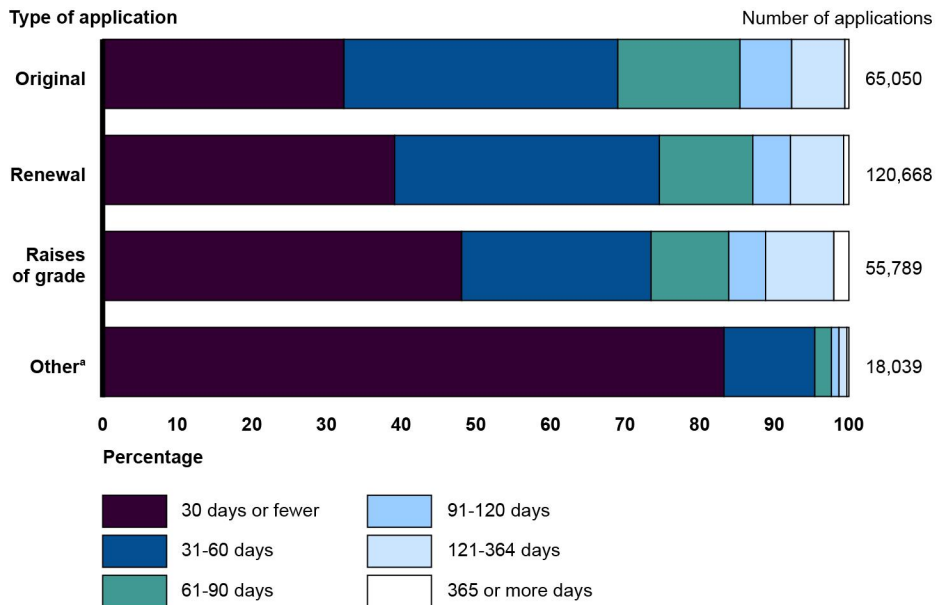
Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Note: Data are as of April 2023. We analyzed overall processing time for credentials the Coast Guard issued for applications received beginning January 1, 2018, through June 30, 2022; we included the applications for only the first 6 months of 2022 to allow at least 6 months to elapse in order to more accurately capture the full processing times for all applications received within the time period. Analyzing issued credentials for applications received up through June 2022 means that some credentials that ultimately look longer than 120 days to process in 2022 may not be included.

As shown in figure 5 above, the annual percentages of credential applications the Coast Guard processed in an overall processing time of over 60 days remained relatively stable, with the exception of those it received in the first half of 2022, which saw a relative increase in applications processed in 61 days or more.

The Coast Guard’s overall processing time also varied by transaction type for credential applications it received from January 2018 through June 2022 (see fig. 6). For example, it generally took more time to process original credentials than other types, and less time to process duplicate and domestic/continuity credentials (depicted in fig. 6 in the “other” category).

Figure 6: Percentage of Coast Guard Merchant Mariner Credentials Issued by Type and Overall Processing Time in Days, for Applications Received from January 2018 through June 2022



Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Data table for Figure 6: Percentage of Coast Guard Merchant Mariner Credentials Issued by Type and Overall Processing Time in Days, for Applications Received from January 2018 through June 2022

Application Type	30 days or less	31 - 60 days	61 - 90 days	91 - 120 days	121 - 364 days	365+ days or more	Total number of applications
Original	32.3%	36.7%	16.4%	6.9%	7.1%	0.5%	65050

Application Type	30 days or less	31 - 60 days	61 - 90 days	91 - 120 days	121 - 364 days	365+ days or more	Total number of applications
Renewal	39.1%	35.5%	12.5%	5.0%	7.1%	0.7%	120668
Raises of grade	48.1%	25.4%	10.4%	5.0%	9.1%	2.0%	55789
Othera	83.3%	12.2%	2.2%	1.0%	1.1%	0.3%	18039

Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

^a“Other” includes duplicate and domestic/continuity credential applications.

Note: Data are as of April 2023. We analyzed overall processing time for credentials the Coast Guard issued for applications received beginning January 1, 2018, through June 30, 2022; we included the applications for only the first 6 months of 2022 to allow at least 6 months to elapse in order to more accurately capture the full processing times for all applications received within the time period. Analyzing issued credentials for applications received up through June 2022 means that some credentials that ultimately look longer than 120 days to process in 2022 may not be included.

What factors affect processing times?

The Coast Guard’s processing times can vary due to the complexity or completeness of the application, the number of applications received, and the availability of the Coast Guard’s human capital and information technology resources, according to our review of application data and interviews with Coast Guard officials described below:

Application complexity or completeness. Applications that require more documentation from mariners for evaluators to assess and verify can take longer to process. For example, there are about 100 endorsements that a mariner could either be applying for or already have that an evaluator must verify. Coast Guard officials also said a common reason that can add time to processing credentials is receiving an incomplete application. From January 2018 through December 2022, 57 percent of applications received by the Coast Guard required additional information from applicants, according to our analysis of application records. Types of missing or additional information may include signatures on forms, processing fees, or proof of eligibility for the type of credential the mariner is requesting. Another factor that can affect processing times is if a mariner needs to complete additional testing to qualify for the position. According to Coast Guard officials, mariners have 1 year to complete testing requirements.

Application volume. The existing volume of in-progress applications affects processing time of additional applications received. Officials told us that they experience an increase in application volume in the spring season, which we confirmed in our analysis of Coast Guard data. For example, from 2018 through 2022, the Coast Guard generally received the highest volume of applications in March through May, compared to the other seasons. Officials said this volume increase is largely because of mariners seeking seasonal employment on passenger vessels (e.g., whale watching boats). Officials said that apart from anticipating the seasonal trend in application volume, they do not have any control over the volume of applications mariners may submit throughout the year.

Availability of Coast Guard human capital and information technology resources. Coast Guard officials explained that availability of staff trained to process different applications affects application processing time. For example, officials told us they typically operate with a 20 percent vacancy rate at the National Maritime Center. Additionally, external events can affect the Coast Guard workforce, such as the government shutdown in January 2019 and the onset and lasting effects of the COVID-19 pandemic in 2020.

Coast Guard staff use a proprietary database designed for the credentialing process as well as custom passport-style printers to process credentials. Those resources require scheduled and unscheduled maintenance, which officials said can affect application processing times. For example, unscheduled outages affecting the Merchant Mariner Licensing Documentation System limit the Coast Guard's ability to process applications.

Additionally, the Coast Guard's printers often need maintenance that requires imported parts, which can add time to credential processing and poses a significant risk to the effectiveness of the credentialing program mission. According to Coast Guard officials, the mariner credentials are unique in that the passport-style booklets use double-sided printing and laminating, which requires a second pass through the printer. Figure 7 shows a printer that has been inoperable since October 2022 (as of April 2023).

Figure 7: One of Three Printers, Inoperable Since October 2022, the Coast Guard Uses to Print Merchant Mariner Credentials (as of April 2023)



Source: GAO | GAO-23-106629

To address the issue of printing credentials, the Coast Guard has taken steps to mitigate impacts of potential breakdowns, such as hand-laminating the credential booklets. Officials also completed a study in early 2023 detailing the challenges with their printers and identified two recommendations. The first is that as the Coast Guard modernizes its credentialing process, it should seek alternative formats for credentials to replace the passport-style booklets. According to the Coast Guard, an Analysis of Alternatives was conducted in 2021 to explore different options.¹⁰ The second recommendation is that until the Coast Guard implements a new permanent credential type, the National Maritime Center should develop options and alternatives to further mitigate the problem. According to Coast Guard officials we spoke with at the National Maritime Center, they were working on an options proposal to present to senior leadership in June 2023.

What steps has the Coast Guard taken and what additional opportunities exist to improve the credentialing process?

Over the past several years, the Coast Guard has taken steps to improve the credentialing process and is in the process of modernizing its credentialing information technology infrastructure. For example, the Coast Guard made two changes to the credentialing process related to medical screening and entry-level applications as a result of the COVID-19 pandemic. Officials said these two changes helped them process applications faster, as described below:

- **Medical screening.** The Coast Guard moved the medical evaluation portion of the screening to a parallel review track instead of a sequential step in its credentialing process, allowing for processing time improvements. Mariners requiring a medical evaluation as part of the credentialing process may now submit necessary documentation directly to the National Maritime Center.
- **Entry-level applications.** To help improve the timeliness of reviewing applications, the Coast Guard determined that staff in the Application In-processing team (described in figure 2) were qualified to make determinations on approval or denial for entry-level applications. Previously, more highly trained evaluators in its Professional Qualifications Evaluation Branch adjudicated these applications. However, due to staffing shortages during the pandemic, Coast Guard officials made changes for entry-level applications to allow the Professional Qualifications Evaluation Branch time to review more complex applications.

The Coast Guard is also taking steps to modernize its information technology to help improve the overall timeliness of its credentialing process and responsiveness to the mariners. According to our analysis of Coast Guard data and interviews with Coast Guard officials, about half of applicants need to submit additional or missing information at some stage in the credentialing process. The need to request additional information from applicants adds to the overall processing time of an application. Additionally, Coast Guard officials said their current technology limits the amount of detail the Coast Guard can provide to mariners inquiring about the status of their application. According to Coast Guard officials, to address these issues they are currently working on requirements for a new information technology solution. The effort is in an early stage of development, but officials said they plan, at a minimum, to:

- **Prevent submission of incomplete applications.** Coast Guard officials said they need a system that can help ensure mariners provide the necessary documentation from the start to avoid the need to send letters for additional or missing information. According to officials, they envision something similar to tax preparation software which would use easy-to-understand terminology, have checklists for required information, and have controls in place that help ensure the application does not move forward without the required supporting documentation or forms.¹¹ They expect this new system to eliminate most of the manual entry of applications at the regional exam centers and at the National Maritime Center.
- **Establish an application status dashboard for applicants.** According to Coast Guard officials, they receive numerous calls from mariners inquiring about the status of their credentials application. Because the Coast Guard's current system was largely designed to assign applications, it does not provide full visibility into real-time status, and call center operators typically need to ask evaluators for specific details about the status of an application. According to Coast Guard officials, they would like to have a system that could provide a real-time dashboard status of a mariner's application.¹²

Coast Guard officials said they would like the new system to allow (1) third parties to directly submit information, such as verification of sea service from companies that operate commercial vessels, and (2) connectivity to other systems. For example, the Coast Guard relies on information from the Transportation Security Administration's Transportation Worker Identification Credential program to verify the status of an applicant's credential from the Transportation Security Administration. We previously reported in 2015 that the Coast Guard had difficulties verifying the sea service of applications because it does not receive all the certificates of discharge from shipping companies.¹³ Coast Guard officials confirmed this remains a challenge for them, which they anticipate the new system will address.

As part of the Coast Guard's fiscal year 2024 budget justification, the information technology and modernization for the merchant mariner credentialing process is one of four priorities in its cyber and enterprise mission platform budget request of \$25.3 million. According to the budget justification, this funding will begin to address modernization efforts. The Coast Guard has also identified an \$11 million need for the system in its fiscal year 2024 Unfunded Priorities List.¹⁴

How does the Coast Guard measure the performance of its credentialing process?

The Coast Guard measures the performance of its credentialing process with three primary measures—inventory, throughput, and processing time. Each of these measures has associated goals, and the Coast Guard posts monthly reports of its performance on its website in these three categories.¹⁵

Inventory. The Coast Guard set a goal to have no more than 9,000 applications in process in any given month and considers anything more than that to be a backlog.¹⁶

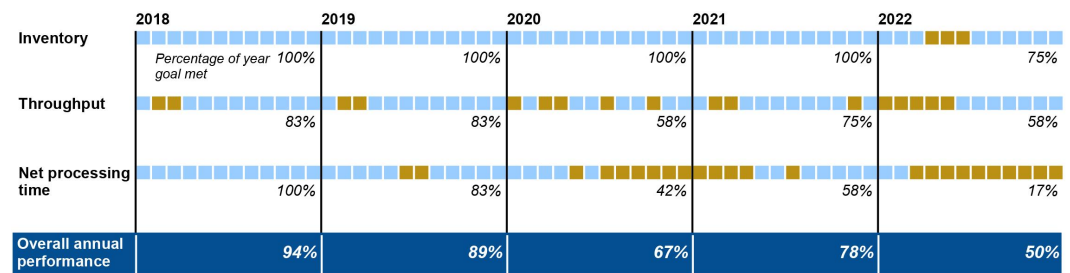
Throughput. Throughput is a ratio of the number of applications finished divided by the number of applications received. The Coast Guard's goal is 1.0 or greater.¹⁷

Processing time. The Coast Guard assesses its processing time performance against a goal it set for net processing time—30 days. Net processing time is from the date an application is submitted to the date the Coast Guard issues credentials, not including time the National Maritime Center waits for information from applicants. Although the Coast Guard includes overall processing time in its processing time performance measure definition, it does not have a goal for overall processing time—from the date an application is submitted to the date it issues the credentials and *including* any time needed for a mariner to submit additional information or complete testing requirements.

What have been the performance results over the past 5 years?

From January 2018 through December 2022, the Coast Guard's credentialing process performance varied (see fig 8). Over this time period, the percentage of months the Coast Guard achieved its goal for inventory was 95 percent, for throughput 72 percent, and for net processing time 60 percent. Additionally, since 2018, the Coast Guard's annual performance across these measures has generally declined, as shown in figure 8.

Figure 8: Coast Guard Credentialing Process Performance Results, by Month and Year, from January 2018 through December 2022



Legend

- Met goal
- Did not meet goal

Source: GAO analysis of Coast Guard merchant mariner credentialing performance data. | GAO-23-106629

Note: Percentage of year goal met is the number of months the Coast Guard met the goal divided by the total number of months. The overall annual performance is the percentage for each performance measure divided by the three measures.

Many factors affect the Coast Guard’s ability to process credential applications, such as staff availability, which can affect the performance of the credentialing process. Specific to 2022 staff availability and performance, Coast Guard officials explained that there was a 33 percent vacancy rate at the Professional Qualifications Evaluation Branch that slowed the processing time of credentials. As a result, this negatively affected performance results for that year.

How do the credentialing performance measures support broader Coast Guard goals, and what opportunities exist for improvement?

The Coast Guard’s key performance measures help partially support one of its Marine Safety strategic goals of improving service to mariners, the maritime community, and the public. However, adding an additional processing time measure and using it to track performance of overall processing time could help ensure the Coast Guard remains responsive to mariners’ needs.

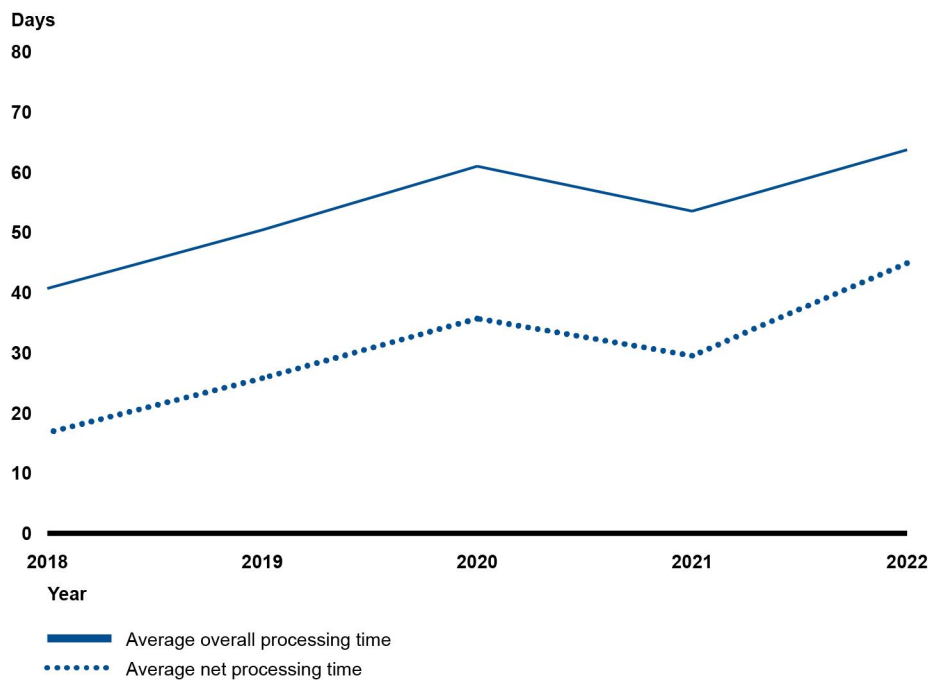
The Marine Safety Mission has a strategic objective assuring that the mariner credentialing process remains responsive to mariners’ needs, and calls on the Coast Guard to continue to improve the application process. As mentioned above, the Coast Guard uses the measures of inventory, throughput, and processing time, as well as stage-specific processing goals, to routinely monitor the credentialing process to improve efficiency. For example, the National Maritime Center established cycle time and inventory goals for each stage of the credentialing process. It monitors them daily and weekly, and documents point-in-time results monthly on a scorecard. It uses metrics to monitor the process for signs of lag time and to shift staffing resources, as necessary, to maintain efficiency. As a result of inventory and staffing monitoring, the National Maritime Center was able to streamline part of the adjudication process for less complex applications, which allowed more highly trained evaluators to focus on more complex applications. According to Coast Guard officials, this change created processing time efficiencies for all application types.

However, the Coast Guard’s primary processing time metric covers the net processing time, and does not account for its overall processing time. The overall processing time includes the time after the Coast Guard receives an application before it is entered into the database and the time provided to mariners required to submit additional information or to complete testing requirements. As a result, the Coast Guard’s current measure of the net processing time does not fully reflect what officials referred to as the “mariner reality.” This is because mariners are more likely tracking how long the overall process takes from the time they

submit an application at a regional exam center to the time they receive the credentials, if approved.

As shown in figure 9 below, there is a difference between the net processing time and the overall processing time. The figure shows the Coast Guard’s average net and overall processing times from January 2018 through June 2022. With the exception of the first half of 2022, the average difference between net processing time and overall processing time was approximately 3 weeks, or 24 days. As discussed above, the Coast Guard processed most applications over the past 4.5 years in an overall processing time of 60 days or less. However, using net processing time as a performance measure does not fully reflect the Coast Guard’s ability to remain responsive to the mariners’ reality, as mariners work to provide additional information and wait for credentialing decisions.

Figure 9: Coast Guard Average Overall and Net Processing Times, by Year, for Credential Applications Received from January 2018 through June 2022



Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Data table for Figure 9: Coast Guard Average Overall and Net Processing Times, by Year, for Credential Applications Received from January 2018 through June 2022

Year	Net processing time	Overall processing time
2018	16.72	40.68
2019	25.76	50.4
2020	35.67	60.98
2021	29.51	53.52
2022	44.88	63.71

Source: GAO analysis of Coast Guard merchant mariner credentialing data. | GAO-23-106629

Note: Data are as of April 2023. We analyzed overall processing time for credentials the Coast Guard issued for applications received beginning January 1, 2018, through June 30, 2022; we included the applications for only the first 6 months of 2022 to allow at least 6 months to elapse in order to more accurately capture the full processing times for all applications received within the time period. Analyzing issued credentials for applications received up through June 2022 means that some credentials that ultimately look longer than 120 days to process in 2022 may not be included.

According to the Coast Guard's *Framework for Strategic Mission Management, Enterprise Risk Stewardship, and Internal Control* (Framework), the key to assessing effectiveness is measuring the right things, and not just aspects for which there are data.¹⁸ The Framework highlights the importance of having performance targets, which the Coast Guard defines as credible forecasts of expected results that provide a benchmark for gauging performance. It also describes the importance of tracking results over time and being able to identify corrective actions if performance measures were not met.

According to Coast Guard officials, the Coast Guard has not set a performance measure for overall processing time, because too many aspects of the process are outside of the Coast Guard's control. For example, over 50 percent of applications for credentials require additional information from mariners at some point in the application review process. According to officials, during these times, the application is paused in the database and cannot move forward in the review process. Additionally, because the Merchant Mariner Licensing and Documentation System is used to calculate processing time, the time between when a regional exam center receives an application to the time it enters it into this system is not officially recorded, although the goal is no more than 5 days. According to Coast Guard officials, reducing overall processing time is important to them and their ability to serve the mariners. Ideally, according to the officials, the Coast Guard would like to eliminate the need to request additional information from mariners and have very few applicants who require additional time for testing to obtain qualifications for credentials.

We recognize that the entirety of the merchant mariner credentialing process is not within the control of the Coast Guard's National Maritime Center. However, the Coast Guard has historical information on average overall processing time and the time it took mariners to provide additional requested information. Therefore, it is reasonable to expect the Coast Guard to be able to develop a performance measure for overall processing time. The Coast Guard could set, for example, a target for a certain percentage of applications processed within an overall set time period.

According to Coast Guard officials, they have used historical processing time data to set their net processing time goal and adjust the time limits allowed for mariners to provide additional information for their applications, if needed. Using historical data on the average amount of time it took mariners to respond to requests for information would help ensure the overall processing time goal they set is reasonable. Additionally, as the Coast Guard takes steps to modernize its credentialing process, having an overall processing time goal will help it assess whether efforts it is taking to reduce the number of applications with incomplete information are effective.

Establishing an additional performance measure that more closely reflects the needs of the mariners applying for credentials could help ensure the Coast Guard is fulfilling its Marine Safety goals and objectives of improving service to mariners, the maritime community, and the public. Using those goals to then measure performance of the credentialing process could also help provide additional accountability and oversight by helping the Coast Guard identify and address areas where corrective action is needed.

Conclusions

Merchant mariners support the maritime commerce industry and may support national defense efforts in times of national emergency and war. To support these efforts, these civilian mariners must hold credentials approved by the

Coast Guard, which assesses the qualifications of mariners based on their type of position and level of responsibility.

The Coast Guard uses key performance measures to help monitor and make adjustments to the process. However, the Coast Guard does not measure the performance of its overall processing time. Therefore, its current processing time measure does not fully capture the entirety of the credentialing process and may not be as meaningful to mariner applicants who are tracking the time from when they apply to when they receive their credentials.

Establishing a performance measure that more closely reflects the needs of the mariners applying for credentials and using it to regularly assess and report on the Coast Guard's credentialing efforts could help ensure the Coast Guard is improving service to mariners, the maritime community, and the public.

Recommendations for Executive Action

We are making the following two recommendations to the Coast Guard:

The Commandant of the Coast Guard should establish a performance measure for assessing the overall processing time to better reflect the needs of merchant mariner credential applicants and the maritime community. (Recommendation 1)

The Commandant of the Coast Guard should, after establishing an overall processing time performance measure, use it to regularly assess and report on the performance of the merchant mariner credentialing program. (Recommendation 2)

Agency Comments and Our Evaluation

We provided a draft of this report to the Coast Guard within the Department of Homeland Security for review and comment. The Coast Guard provided technical comments, which we have incorporated into the report as appropriate. In addition, the Department of Homeland Security provided written comments, which are reprinted in appendix I. In its letter, the department stated it concurred with our two recommendations and provided steps and time frames for addressing them. However, according to the letter, the Coast Guard does not anticipate establishing a performance measure for assessing the overall processing time for merchant mariner credentialing applications until September 29, 2028. The Coast Guard also does not anticipate developing a process to regularly assess its performance against the performance measure until March 30, 2029. As discussed in the letter, the Coast Guard is developing a replacement for its credentialing database that will transform the way the agency processes applications, and its efforts to address our recommendations are tied to that effort. The recommendation implementation timeframes, however, do not address mariners' current needs, and the Coast Guard's acquisitions plans could be delayed, extending implementation efforts even more. Additionally, without establishing a performance measure for assessing the overall processing time sooner, the Coast Guard will not be able to assess whether efforts it is taking in its modernization effort to reduce the number of applications with incomplete information are effective. Therefore, we believe establishing a performance measure for assessing the overall processing and using it to measure the Coast Guard's credentialing performance sooner is warranted.

How GAO Did This Study

To understand the merchant mariner credentialing process and identify areas for improvement, we reviewed the National Maritime Center's website and Coast Guard documentation on the credentialing process. Specifically, we reviewed credentialing standard operating procedures and training manuals for evaluators.

Additionally, we interviewed Coast Guard staff who manage the credentialing process and process applications to gather their perspectives on challenges and opportunities for improvement. We conducted a site visit to the National Maritime Center in April 2023 to observe the credentialing process and gain further understanding of the various levels of application review.

To assess volume and processing times of merchant mariner credential applications, we obtained record-level data from Coast Guard's Merchant Mariner Licensing and Documentation system (database) for the 333,785 applications the Coast Guard received from January 1, 2018, through December 31, 2022. We calculated the volume and processing time for applications during this time period, by month and year and by transaction type. To understand how long it takes Coast Guard to process applications, we analyzed 259,546 issued credentials received from January 1, 2018, through June 30, 2022. We included the applications for only the first 6 months of 2022 to allow at least 6 months to elapse in order to more accurately capture the full processing times for all applications received within the time period.

We confirmed with Coast Guard officials that overall processing time is from the date the application was received to the date the credential was printed. Net processing time is equal to overall processing time minus any time an application was paused awaiting additional information from the applicant over the course of processing.

To assess the reliability of the data, we interviewed knowledgeable officials, reviewed documentation about the system, and conducted electronic testing of the data. We determined the data were sufficiently reliable to describe trends over time in volume and processing times. To assess factors affecting processing times, we interviewed knowledgeable officials about inherent challenges with the credentialing process and outside events over the past 5 years that affected processing times. We also reviewed annual performance reports that documented some of these factors.

To determine how the Coast Guard measures the performance of its credentialing process, assesses performance results, and identifies what opportunities exist to improve how the Coast Guard measures its performance, we analyzed Coast Guard documentation and interviewed officials. Specifically, we analyzed monthly Coast Guard data on performance results from January 2018 through December 2022, as well as annual performance reports. We compared the data against goals the Coast Guard identified for its credentialing process. We interviewed officials to determine how those goals were established and whether they had changed over time. We also compared the Coast Guard's measures against its strategic-level goals identified in its *Marine Safety Long Term Strategy, FY 2019 Performance Report, and FY 2020-2023 Triennial Plan and Framework for Strategic Mission Management, Enterprise Risk Stewardship, and Internal Control* to assess linkages and to identify potential gaps in alignment.¹⁹

We conducted this performance audit from January 2023 to July 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

List of Addressees

The Honorable Maria Cantwell
Chair
The Honorable Ted Cruz
Ranking Member
Committee on Commerce, Science, and Transportation
United States Senate

The Honorable Sam Graves
Chairman
The Honorable Rick Larsen
Ranking Member
Committee on Transportation and Infrastructure
House of Representatives

GAO Contact Information

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Staff Acknowledgements: Ben Atwater (Assistant Director); Susanna Kuebler (Analyst-in-Charge); Billy Commons, Michele Fejfar; Austin Lyke, Paras Sharma, Janet Temko-Blinder, and Noor Tofailli made key contributions to this report.

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**Appendix I: Comments
from the Department of
Homeland Security**

U.S. Department of Homeland Security
Washington, DC 20528



**Homeland
Security**

July 12, 2023

Heather MacLeod
Director, Homeland Security and Justice
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548-0001

Re: Management Response to Draft Report GAO-23-106629, "Merchant Mariner
Credentialing: Coast Guard Performance Measures Could Better Address
Mariners' Needs"

Dear Ms. MacLeod:

Thank you for the opportunity to comment on this draft report. The U.S. Department of Homeland Security (DHS or the Department) appreciates the U.S. Government Accountability Office's (GAO) work in planning and conducting its review and issuing this report.

DHS leadership is pleased to note GAO's positive recognition that the U.S. Coast Guard's (Coast Guard) National Maritime Center was able to streamline the credentialing review adjudication process. This improved the overall timeliness on processing credentials and responding to mariners. DHS remains committed to supporting the maritime commerce industry and national defense efforts during national emergencies and war by strengthening the efficiency of the merchant mariner credentialing process.

The draft report contained two recommendations with which the Department concurs. Enclosed find our detailed response to each recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and other issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H
CRUMPACKER

Digitally signed by JIM H
CRUMPACKER
Date: 2023.07.12 13:21:11 -04'00'

JIM H. CRUMPACKER, CIA, CFE
Director
Departmental GAO-OIG Liaison Office

Enclosure

**Enclosure: Management Response to Recommendations
Contained in GAO-23-106629**

GAO recommended that the Commandant of the Coast Guard:

Recommendation 1: Establish a performance measure for assessing the overall processing time to better reflect the needs of merchant mariner credential applications and the maritime community.

Response: Concur. The Coast Guard’s Merchant Mariner Credentialing Program currently uses a paper-based system and database, known as Merchant Mariner Licensing Documentation (MMLD). The MMLD is used to produce merchant mariner credentials (MMCs), including each endorsement. To provide an overall process time metric that is valuable to stakeholders, each MMC endorsement needs individual consideration. The Coast Guard’s Office of Merchant Mariner Credentialing (CG-MMC) is developing a replacement for the MMLD database that will transform the way the Mariner Credentialing Program interacts with stakeholders, and processes MMC applications. Once implemented, the MMLD replacement system will inherently eliminate delays by preventing the submission of incomplete applications to the Coast Guard. Once the new credentialing system is deployed, the Coast Guard will develop appropriate metrics. Deployment of the replacement system for the current MMLD database is dependent on Congressional funding. This effort will include:

Actions	Estimated Completion Date (ECD)
Appropriation Received	October 31, 2023
Approval for Acquisition	November 30, 2023
Acquisition/Contract Award	September 30, 2024
System Design and Development	December 31, 2025
System Testing	March 31, 2026
Initial Deployment	September 30, 2026
Full Operating Capability	March 31, 2027
Development of Processing Time Performance Measure(s)	September 29, 2028

Overall ECD: September 29, 2028.

Recommendation 2: After establishing an overall processing time performance measure, use it to regularly assess and report on the performance of the merchant mariner credentialing program.

Response: Concur. Once the MMLD replacement system is deployed and fully

operational as described above, the Coast Guard National Maritime Center will develop a process to regularly assess the performance of the merchant mariner credentialing program. This effort will include:

Actions	ECD
Appropriation Received	October 31, 2023
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Full Operating Capability	March 31, 2027
Development of Processing Time Performance Measure(s)	September 29, 2028
Development of process for regular assessments	March 30, 2029

Overall ECD: March 30, 2029.

Text of Appendix I: Comments from the Department of Homeland Security

July 12, 2023

Heather MacLeod

Director, Homeland Security and Justice

U.S. Government Accountability Office 441 G Street, NW

Washington, DC 20548-0001

Re: Management Response to Draft Report GAO-23-106629, "Merchant Mariner Credentialing: Coast Guard Performance Measures Could Better Address Mariners' Needs"

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The draft report contained two recommendations with which the Department concurs. Enclosed find our detailed response to each recommendation. DHS previously submitted technical comments addressing several accuracy, contextual, and other issues under a separate cover for GAO's consideration.

Again, thank you for the opportunity to review and comment on this draft report. Please feel free to contact me if you have any questions. We look forward to working with you again in the future.

Sincerely,

JIM H. CRUMPACKER, CIA, CFE

Director

Departmental GAO-OIG Liaison Office

Enclosure

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Recommendation 1: Establish a performance measure for assessing the overall processing time to better reflect the needs of merchant mariner credential applications and the maritime community.

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Coast Guard’s Office of Merchant Mariner Credentialing (CG-MMC) is developing a replacement for the MMLD database that will transform the way the Mariner Credentialing Program interacts with stakeholders, and processes MMC applications. Once implemented, the MMLD replacement system will inherently eliminate delays by preventing the submission of incomplete applications to the Coast Guard. Once the new credentialing system is deployed, the Coast Guard will develop appropriate metrics.

Deployment of the replacement system for the current MMLD database is dependent on Congressional funding. This effort will include:

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Full Operating Capability	March 31, 2027
Development of Processing Time Performance Measure(s)	September 29, 2028

Overall ECD: September 29, 2028.

Recommendation 2: After establishing an overall processing time performance measure, use it to regularly assess and report on the performance of the merchant mariner credentialing program.

Response: Concur. Once the MMLD replacement system is deployed and fully operational as described above, the Coast Guard National Maritime Center will develop a process to regularly assess the performance of the merchant mariner credentialing program. This effort will include:

Actions	ECD
Appropriation Received	October 31, 2023
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Full Operating Capability	March 31, 2027
Development of Processing Time Performance Measure(s)	September 29, 2028
Development of process for regular assessments	March 30, 2029

Overall ECD: March 30, 2029.

Endnotes

¹Pub.L.No. 117-263, § 11513, 136 Stat. 2395, 4139.

²Monitoring units are additional facilities that can provide licensing and examination services to merchant mariners on behalf of regional exam centers.

³Mariners can also apply for continuity of their existing credentials.

⁴Mariners also need a medical certificate that proves that the mariner meets the medical and physical requirements needed for their position. Applicants and their physicians are to complete the medical certificate application and send it directly to the National Maritime Center where it is evaluated. If approved, a medical certificate is printed and mailed to the mariner.

⁵Credentials may be approved and issued, denied, withdrawn by the applicant, or timed out, if missing information is not provided in the time permitted.

⁶An endorsement indicates that the mariner is qualified to serve in a specific capacity. There are about 100 endorsements that fall under four types: National Officer; National Rating; Tankerman; and International Convention on Standards of Training, Certification, and Watchkeeping for Seafarers. Mariners may request or possess more than one type of endorsement.

⁷Prior to 2008, the time given to applicants to submit requested missing and additional information was 1 year. In 2008, a Coast Guard study found that, on average, applicants provided information within 60 to 90 days. As a result, the Coast Guard adjusted the amount of time provided to mariners to submit requested information.

⁸Domestic/continuity documents are issued solely to maintain an individual's eligibility for renewal. The holder is not authorized to work under this document.

⁹In analyzing the data, there was a natural break in the distribution of processing time between 60 or fewer days and 61 or more days.

¹⁰According to Coast Guard officials, at the time the Analysis of Alternatives was completed in 2021, all three printers were operational. Therefore, there was not a justifiable need to change the credential type.

¹¹The Coast Guard posts checklists and other information on the National Maritime Center website to help applicants. However, officials we met with acknowledged that checklists and forms may use more technical or regulatory language and therefore may not be easily understood by applicants. They plan to address that with the new information technology design.

¹²Although the Coast Guard envisions a more user-friendly system to provide status information, officials said many of the mariners they serve prefer to call and talk to an individual, rather than using the online tools currently available. Therefore, even a more modern system may not fully alleviate the volume of inquiries to the call center.

¹³GAO, *International Food Assistance: Cargo Preference Increases Food Aid Shipping Costs, and Benefits Are Unclear*, GAO-15-666 (Washington, D.C.: Aug. 26, 2015).

¹⁴Pursuant to 14 U.S.C. § 5108, the Commandant of the Coast Guard is required to submit annually a list of approved but unfunded Coast Guard priorities to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

¹⁵https://www.dco.uscg.mil/nmc/performance_stats/

¹⁶According to Coast Guard officials, the agency typically receives 280 applications a day. They said they rounded that number up to 300 applications a day for 30 days to establish the 9,000 performance indicator.

¹⁷The total number of credentials received and credentials issued, denied, withdrawn, and timed out are included in this measurement.

¹⁸U.S. Coast Guard, Deputy Commandant for Operations, *Framework for Strategic Mission Management, Enterprise Risk Stewardship, and Internal Control* (Washington, D.C.: July 2020).

¹⁹Marine Safety Long Term Strategy, Fiscal Year 2019 Performance Report, and Fiscal Year 2020-2023 Triennial Plan (Washington, D.C.: November 2020); U.S. Coast Guard, Deputy Commandant for Operations, *Framework for Strategic Mission Management, Enterprise Risk Stewardship, and Internal Control* (Washington, D.C.: July 2020).