Coast Guard Leverages Aviation Workhorse to Overcome Challenges in Cutter Logistics in Oceania

SANTA RITA, Guam – Guam is home to three 154-foot fast response cutters commissioned in 2021. These ships are built in Lockport, Louisiana. After initial workups, they sailed from Key West through the Panama Canal, more than 10,000 miles to Guam. In the time since the crews have stayed busy conducting the U.S. Coast Guard's core missions in Micronesia and supporting our Blue Pacific partners.

The Operations Area

For many of the Nation’s fast response cutters, the transit to homeport from Key West is one of the most extended trips they make. Those stateside remain close to most essential services needed to maintain the vessels, designed to operate within 200 nautical miles of homeport. In the case of the Guam-based fleet, they routinely go more than 200 nautical miles to get to the operations area. U.S. Coast Guard Forces Micronesia/Sector Guam has one of the largest areas of responsibility of any sector at 1.9 million square miles. Like its other overseas counterparts, the region can be austere and presents unique challenges.

U.S. Coast Guard Forces Micronesia/Sector Guam (CGFM/SG) differs. The USCGC Oliver Henry (WPC 1140) undertook a more than 6,000-mile expeditionary patrol south through Oceania with inaugural FRC port calls in Papua New Guinea and Australia. Its sister ship, the USCGC Frederick Hatch (WPC 1143), just concluded a similar patrol in support of Operations Rematau and Blue Pacific, the southeast of Guam. The patrol countered illegal, unreported, and unregulated fishing off the Federated States of Micronesia, the Republic of the Marshall Islands, and the Republic of Nauru by enforcing regulatory schemes and individual countries’ sovereignty while strengthening partnerships through shiprider operations, subject matter exchanges, and community engagements.

“What often goes unsaid is the logistics piece enabling the operations,” said Chief Warrant Officer Manny Pangelinan, engineering officer for CGFM/SG. The Oliver Henry required a last-minute shipment of fuel injectors while underway, a package coordinated by the CGFM/SG logistics department with some support from the Surface Force Logistics Center in Baltimore. The package was shipped via a commercial carrier and met them in Australia.

But more oversized items and hazardous materials can present a more complex challenge. Guam is a strategic location, and as a

U.S. territory, it is the first line of defense against regional competitors. Logistically, it is remote and depends on maritime cargo for most items. Nearly 90 percent of imports come through the Port of Guam, and travel by sea varies in cost and takes time. Commercial air freight requires less time but can be very expensive.

The Logistics Challenge

Each FRC has four bottles of compressed gas onboard as part of the fire suppression system. The current design of the FRCs uses FN200 powder and nitrogen gas. Over time these bottles lose nitrogen and need to be recharged, the same as any fire extinguisher. If an extinguisher or system loses its prime, it may malfunction and not adequately suppress a fire. Stateside servicing this equipment is a simple endeavor, but service providers in Guam still need to be created. To further complicate matters, if a local provider converted existing equipment to service this system, it could only be used on FN200 to prevent cross-contamination. The U.S. Coast Guard is currently the only FN200 client on the island.

As the Frederick Hatch prepared for their patrol, the crew noted one of the four bottles was borderline between yellow and red on its pressure. No one wants to be over a thousand miles from shore, with a fire, and risk a system malfunction. But how do you get a 277-pound replacement bottle, considered a hazardous material, shipped from the mainland United States to the territory of Guam? And how do you do it in time to meet the ship’s schedule and enable the crew to fulfill their mission requirements in Micronesia? You keep it in-house and leverage the naval aviation community.

Coast Guard Aviation in Oceania

U.S. Coast Guard Air Station Barbers Point in Hawaii conducts search and rescue, maritime domain awareness and surveillance, law enforcement, and cargo and transportation operations

throughout Oceania. They are currently the only U.S. Coast Guard air station in the U.S. Coast Guard 14th District, with the next closest aviation unit in California. Still, from 1947 until 1972, they operated an air detachment in Guam known as Naval Air Station Agana to provide LORAN support for Western Pacific stations.

Today, the Barbers Point team operates four MH-65 Dolphin helicopters and four HC-130 Hercules airplanes. The Hercules airframes were recently upgraded from the H model to the J model. For Guam, this is significant. The J is more capable as a long-range surveillance aircraft providing heavy air transport and long-range maritime patrol capability. Each plane can serve as an on-scene command and control platform or as a surveillance platform with the means to detect, classify, and identify objects and share that information with operational forces. It also has "long legs." Where the H crews needed to stop for fuel en route to Guam from Hawaii, the J could make the trip in one leg if necessary. This advantage matters when time is of the essence, particularly in search and rescue cases.

Capt. John Rivers, CGAS Barbers Point commanding officer, recently visited Guam. He met with the CGFM/SG team to discuss options for more aviation support to Western and Central Pacific operations. Those ideas include more hours of Hercules activity in this region and possible use of the Dolphin helicopters outside Hawaii.

The Workhorse

Regarding transporting equipment, the aircrew, particularly the loadmaster, has the final say on what goes aboard the plane. The Barbers Point team and the loadmaster were crucial to keeping the Frederick Hatch on schedule.

The team flew the HC-130 Hercules CG 2009 to Sacramento to pick up the shipment of fire bottles, then returned to Hawaii

to rest and refuel. Subsequently, they flew to Majuro and landed in Guam on Nov. 9 at the A.B. Won Pat Guam International Airport. The CGFM/SG engineering team and environmental contractors met them to further transport the bottles to the pier.

All told, the movement cost flight hours and personnel time – but that is the nature of logistics. Per Commandant Instruction 7310.1V Reimbursable Standard Rates, the inside government rate for an HC-130J is $19,782 per hour. This includes Direct Costs like labor, employee benefits, fuel, maintenance, etc.; Support Costs: Costs allocated to a particular asset class for the support received from Coast Guard support activities, including but not limited to Area Commands, Districts, Sectors, Sector Field Offices, Bases, etc.; and General and Administrative: Costs allocated to a particular asset class to represent benefit received from Coast Guard general and administrative activities such as legal services, payroll processing, etc.

However, aircrews make the most out of every flight, coupling logistics with other missions and training whenever possible. Flight crews must also fly a certain number of monthly hours to maintain currency and proficiency.

The personnel hours, in this case, include the coordination and research by the CGFM/SG Engineering Team to enable the technician from the fire services company to come out, install and certify the new bottle. The team kept the cost down by more than $16,000 by flying out one technician instead of two and doing all the manual labor of removing and replacing the existing bottle with the ship’s force. Transporting a 277-pound bottle across the pier, onto the cutter, and into the space with a tripod and chain fall in 90-degree heat with 90 percent humidity is quite an undertaking. According to Reimbursable Standard Rates, the inside government cost of a CWO2 is $79 per hour, a Chief Petty Officer is $71, and a Petty Officer 2nd Class is $55. Still, these personnel, like

the aircrew, are salaried. The figures come into play if the Service seeks reimbursement from another branch or outside entity for services. The outside government rate is higher.

One might ask how to avoid this challenge in the future, as this won't be the last time these bottles need to be recharged. One possible alternative was building a facility to support the maintenance of these systems in Guam to the tune of more than a million dollars. Ultimately, this option was deemed unrealistic. Instead of a new facility, the engineering team procured a larger bottle of FN200 and equipment to be kept onsite to recharge the FRCs' systems. The team will do the heavy lifting and fly out a technician for the final assembly and certification. Two complete sets of bottles were procured at the same time. The first set came aboard the Hercules, and the second will come by cargo ship at a fee of just under $4,000. However, as of Christmas, the second set of bottles are still in transit and will take around 75 days total to arrive, emphasizing the importance of the Engineering Team's efforts and choices.

Forecast

"This team continues to deliver on the Commandant's mandate to be creative and innovative to craft solutions to the challenges we face as a service," said Capt. Nick Simmons, commander of CGFM/SG. "I am impressed by their commitment and resolve to consistently deliver superior engineering support, keeping us operational in a remote environment."

In the Fiscal Year 2022, the three Guam-based FRCs spent 324 days away from homeport, with 243 of those days physically underway conducting missions at sea. The other days away from homeport account for port calls, community engagements, and maintenance away from the home station. They worked 25 patrols throughout the region, enforcing the rule of law and strengthening partnerships. Guam's sister sector in Honolulu also has three FRCs doing local and long-range missions. By

comparison, they spent 202 days at sea for roughly the same number of patrols. This underscores the distances and demands Team Guam is covering.

“We have better platforms to help our crews get after the ever-growing mission demand here. But we must not lose sight of the demand on the crews and what is necessary to maintain our availability and effectiveness as a preferred partner in the region,” said Simmons. “That means putting steel on target, remaining flexible, and ensuring our crews have the support they need to succeed in a dynamic operational environment. I thank the CGAS Barbers Point team for ensuring our success and enabling the Frederick Hatch crew to work with our partners in Oceania and protect the Nation.”

This fire bottle transport is an excellent example of integrated logistics across the U.S. Coast Guard enterprise and innovation to find a timely cost-reasonable solution to keep the ship operational and on schedule. It is also a model for expanded Coast Guard aviation support to Guam.