

SPECIAL UNIT PROFILE

USCG Air Station Miami

Earning its title of 'busiest air/sea rescue unit in the world.'



By Brent Holman
ATP/CFI/Helo. Bell 206L



US Coast Guard Air Station Miami personnel with a Eurocopter HH65C and Dassault HU25 on the ramp in front of the operations center at OPF (Opa-Locka, Miami FL).

Early in the morning hours of Aug 29, 2005, Hurricane Katrina charged ashore near New Orleans LA. Hours after pounding the area with 125-mph winds, torrential rain and a tsunami-like storm surge, things only worsened as the damaged levy system, intended to protect New Orleans residents from Lake Pontchartrain's water, failed and flooded the city and neighboring parishes. Rising floodwaters and other damage throughout the Gulf Coast injured and stranded countless people, some clinging to the rooftops of their flooded homes and hoping for rescue.

In the days leading up to Katrina's landfall, US Coast Guard pilots and aircrew at CGAS Miami were put on alert to anticipate deployment to the expected target area. While each knew that they might be called on to render aid, none were fully prepared for the scope of the devastation they would find or the sheer number of people who desperately needed their assistance. Once the storm passed, helicopter crews were dispatched from Miami to CGAS Mobile AL, which would be the base of operations for search-and-rescue (SAR) cases flown in support of the Katrina relief effort.

Arriving at CGAS Mobile late in the evening, Coast Guard Aircraft Commander LT Jason Morgan was surprised to find such organization within the damage and disarray at the air station, itself a victim of Katrina. Limited electrical power hampered the normal capabilities of USCG commanders to plan and execute SAR missions—but experience, training and determination led to improvisation and action with the available resources.

Morgan and his crew were ordered back into the air shortly after arriving and told to proceed in a generally westward direction to search for survivors and provide assistance where needed. Flying toward New Orleans, Morgan and crew donned night-vision goggles (NVGs) to enhance their search capabilities. Not long after departing Mobile, what they saw was near utter devastation—vast swaths of land cleared of homes, buildings and vegetation, floodwaters covering those structures that remained and, as they soon discovered, thousands of people needing help.



CGAS Miami Eurocopter HH65C hovers near Coast Guard cutter near Miami during filming of an episode of CSI: Miami. (Insets L-R) Dassault HU25 Guardian. Rescue swimmer and HH65C engaged in training mission.



That first day on the scene, Morgan, his copilot and flight mechanic hoisted 50 people to safety aboard their Eurocopter HH65. As he says, "While 50 people saved that day out of thousands may not seem like much, 50 hoists in one day may be more than some Coast Guard pilots see in an entire career."



In fact, the missions flown supporting the Katrina relief effort left an indelible imprint on the minds of many Coast Guard aircrew. One flight mechanic from CGAS Miami helped his helicopter crew lift 176 people to safety in a single day. According to his supervisor, Senior Chief Dave Kiser, "he was exhausted but would not leave his duty station, insisting to go back again and again to help more people. It was a direct order from me that finally convinced him to seek rest." This commitment runs deep at CGAS Miami and is part of its long history of helping people in distress as "the busiest air/sea rescue unit in the world."

Deep roots

Capt Stephen Mehling commands CGAS Miami, which is located at OPF (Opa-Locka, Miami FL). Although the air station is relatively new, having been on inventory for only about 40 years, Mehling is quick to point out that the Coast Guard is the "longest, continuous armed service in the United States."

Originally established at the Biscayne Bay location in 1932, the air station's proximity to Florida's Gold Coast and the Caribbean basin kept crews busy for decades with SAR and law enforcement (LE) cases. CGAS Miami has supported civilian and military efforts spanning its history—from interdicting Prohibition bootleggers to WWII antisubmarine patrol, humanitarian relief for immigrants braving the waters of the Atlantic, and protecting US shores from smugglers and terrorists.

Today's air station

Mehling notes that, prior to Sep 11, the Coast Guard "was synonymous with search and rescue. In the post-Sep 11 world, mission '1a' remains SAR, but mission '1b' is homeland security and law enforcement."

CGAS Miami is currently assigned 14 aircraft—6 Dassault HU25 Guardians (Falcon 20s) and 8 Eurocopter HH65s—to accomplish this dual role. Under Mehling's command are 75 officers, 275 enlisted personnel and 12 civilians.



CGAS Miami Commanding Officer Capt Stephen Mehling is rated in the Dassault HU25 and Eurocopter HH65.

Operating under the direction of Coast Guard Seventh District Command and Rear Admiral David Kunkel in Miami, CGAS Miami provides air support to missions as far north as Charleston SC and throughout the Caribbean. Last

year the air station flew over 10,000 flight hours, saving or assisting more than 250 people within the operational area.

"The Falcons fly approximately 60% of their hours in support of the LE role and 15% on SAR cases, with the remaining hours dedicated to crew training," says Mehling.

"The split for the HH65s is 40% LE, 20% SAR and a heavy training load due to the nature of the helicopter mission," he says. "In order to maintain operational readiness, helicopter crews have to stay proficient in a myriad of tasks, including day/night IFR/VFR skills, NVG utilization, hoisting and shipboard operations."

Scheduled sorties include intelligence-driven patrols searching for drug smuggling, migrant interdiction and "vessels of interest." The HU25s patrol throughout Miami's area of responsibility, while the HH65's range limits most routine missions to the region south of Port Canaveral to the waters around Key West, unless deployed aboard a Coast Guard cutter.

Operational staff at the air station include flight mechanics, observers and dropmasters (AMTs), rescue swimmers (ASTs), avionics technicians (AETs) and pilots.

Pilots like Morgan speak of their positions in covetous tones, likening their work to membership in an exclusive flying club. Morgan says, "I knew that I wanted to be a Coast Guard pilot as early as my teens. Since that time everything I did was working toward that goal."

After graduating from the US Coast Guard Academy in New London CT, Morgan served aboard a 270-ft cutter for over 2 years before being assigned to flight school.

Other pilots, like LT Lance Kerr, enlisted in the service, served as a rescue swimmer, and was commissioned after completing officer candidate school. Still other pilots are direct-commission aviators who transferred from flying jobs in other armed services to copilot positions on Coast Guard aircraft after receiving transition training and unit qualification.



(L-R) Dassault HU25 crewmembers Observer AET3 Kenneth Leeper, Aircraft Commander LT Adam Parrott, Dropmaster AMT2 Mike Sorrentino (seated), First Pilot LTJG Ashley Lovejoy and Sensor System Operator AET2 Mitch Recker.

Coast Guard pilot candidates undergo initial training at NAS Pensacola FL and finish their schooling at their assigned bases and at aircraft-specific transition courses held at CGAS Mobile or other air stations. Once fully qualified operationally, pilots are assigned to flight status at their respective units.

Pay and benefits for Coast Guard aviators are on par with other branches of the service. However, USCG pilots argue that the flying assignments they receive, and their lifestyle in general, trumps their other military counterparts.

A pilot's normal 5-day work week includes flying and nonflying duties. Administrative work in areas not necessarily related to flying is a normal collateral assignment and is scheduled alongside flying sorties and operations duty officer work. Schedules are published monthly and include local assignments at the pilot's air station. Helicopter deployments aboard cutters usually last 2 weeks and occur 6 or 7 times per year. A normal pilot career spans 20 years, generally culminating with attainment of the rank of commander.



(L-R) Eurocopter HH65 crewmembers Rescue Swimmer AST1 Kurt Peterson, Flight Mechanic AET1 James Van Eman, First Pilot LT Crist Holveck and Aircraft Commander LT Jared King.

AET Bryan Mills services the helicopters' avionics and other electronics. He describes the upgraded HH65Cs, with their improved payload and range, as well equipped for the missions they fly. Rockwell Collins builds most of the HH65's avionics, while communications equipment includes dual Rockwell Collins VHF/UHF radios with secure channel capability.

Navigation is managed by the CDU900, which centralizes navigation sensor inputs, performance and flight planning functions. Output is displayed to the crew on a Rockwell Collins multifunction display (MFD). The system's autoflight function allows "catch/ match" coupled instrument approaches to a hover as low as 50 ft and automated search patterns that permit the pilots to aid in visual searches by reducing their flying workload. Bendix King RDR1300 radar is installed for weather avoidance and ground mapping.

Operational equipment is also extensive. Rescue Swimmer AST Mark Pipkin lists the HH65's normal SAR and LE equipment as a crew life raft, SAR board which holds chemical lights, drop radios, strobes and flares, data marker buoy (DMB) for tracking sea drift, and rescue basket and strop harness for hoisting.

ASTs are responsible for all the safety gear carried aboard, and are schooled in their maintenance and deployment. Dual-role LE/SAR equipment includes a Spectrolab Nightsun searchlight, ANViS9 NVGs for all crewmembers, and a FLIR thermal imaging system with recording capability. Inflight refueling capability above a cutter at sea or other vessel is possible with the installed helicopter inflight refueling (HIFR) system. This allows a flight mechanic to load fuel while the HH65 hovers above a ship. Helicopter shipboard landing capabilities are improved with a talon system that uses a hydraulic claw for attachment to an ondeck cable system—this allows helicopter landings at increased deck angles experienced when the vessel pitches or rolls due to wave action.



HH65 Aircraft Commander LT Jason Morgan. Deployment to the Hurricane Katrina relief effort left a lasting impression.

The Dassault HU25 Guardians are equipped for medium-range SAR and LE support missions. Developed from the Falcon 20, the HU25 features enlarged search windows, added to each side of the cabin to help Coast Guard observers search for targets. A drop hatch cut into the bottom of the fuselage allows aerial delivery of water pumps, life rafts and other rescue equipment under the guidance of a dropmaster and pilot. With the drop hatch closed and the cabin pressurized, the Guardian can cruise at 29,000 ft and 380 kts. This performance allows the Guardian to be "first on scene," providing the crew with the ability to quickly assess and stabilize a dire situation until a helicopter or surface asset arrives.

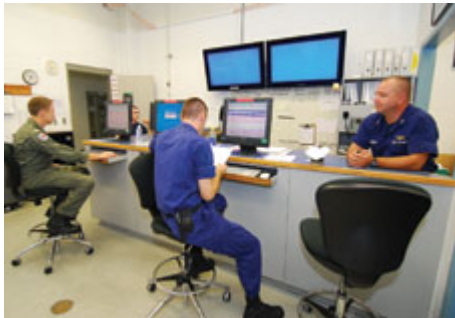
AET Mitchell Recker is an avionics technician serving as an HU25 sensor system operator (SSO). He explains that, "in addition to maintenance responsibilities, the SSO is in charge of operating the radar, FLIR, video systems and communications." Stationed in the extreme aft of the fuselage, the SSO operates the electronic targeting and tracking systems that allow the HU25 to aid in the rescue of distressed mariners or interdict criminals.

Powered by 2 Garrett turbofans, the Guardian houses a wide array of communication and navigation gear tailored to the SAR/LE mission. Like its rotary-wing counterpart, the HU25 uses a suite of Rockwell Collins flight instruments and avionics, including the CDU900.

Telephonics provides the APS143 radar installed on the HU25Ds to allow tracking of multiple targets. Wulfsberg, Motorola and Rockwell Collins provide aircraft, marine, military, UHF and VHF communications radios, as well as secure communications capability. The sensor suite allows the HU25 to acquire, track and display targets with the multisensor system, which includes radar and FLIR Systems thermal imaging equipment. All sensor inputs and display capabilities are coordinated through the onboard OASIS computer.

New aircraft on the horizon

The Coast Guard is undergoing a revamping of its core assets as part of the Deepwater modernization program. Significant changes in air assets include replacement of the HU25s, which have served since the 1980s, with a maritime patrol variant of the CASA CN235—the HC144A.



LT Kent Reinhold (L) checks the status of his aircraft while AMT Jeffrey Brandt (R) and 2 other technicians look on.

These will likely enter service at CGAS Miami in 2009 and, according to Mehling, are programmed to increase operational hours from an annual average of 800 hours per Guardian to 1200 hours for each HC144. The longer range and greater endurance of the HC144 will give USCG greater operational capability and flexibility in SAR, LE and homeland security cases.

Mehling also predicts that CGAS Miami may become a base for the Schweizer RU38 surveillance aircraft, which will be operated jointly by the Coast Guard with US Customs as part of the homeland security mission. The RU38 is a twin-engine, high-endurance, fixed-wing platform for sensitive detection and tracking equipment. The RU38's endurance—6 to 10 hours—stems in part from its capability of shutting down and feathering the aft engine and propeller, which increases loiter time while also reducing noise signature.

CGAS Miami's future

Deepwater and other initiatives will shape the future of CGAS Miami. With the addition of the RU38 and the replacement of the HU25 with the HC144, Mehling expects his pilot roster to grow to accommodate the additional flight hours. In addition, USCG is studying optimal methods for basing helicopters and crews that rotate deployment to cutters at sea. Currently, crews from multiple air stations share the duty—however, it is possible that deployed mission support can be managed better from a common, central location. If such a plan is implemented, it may affect Miami's mission and duties.

Mehling notes, "Air Station Miami does most every type of mission found in Coast Guard aviation." From its start in the 1930s, CGAS Miami has been in the middle of many of the major events in American history. With an ever-increasing role in protecting the homeland as well as protecting people drawn to the sea, Miami will likely remain a lightning rod for growth and activity. Its crews are unlikely to be slowing down any time soon



Brent Holman has held a variety of flight training and operations management positions at a major US air carrier for the past 22 years, in addition to flying the line. He has also been involved in law enforcement aviation as a reserve officer/helicopter pilot since 1985.