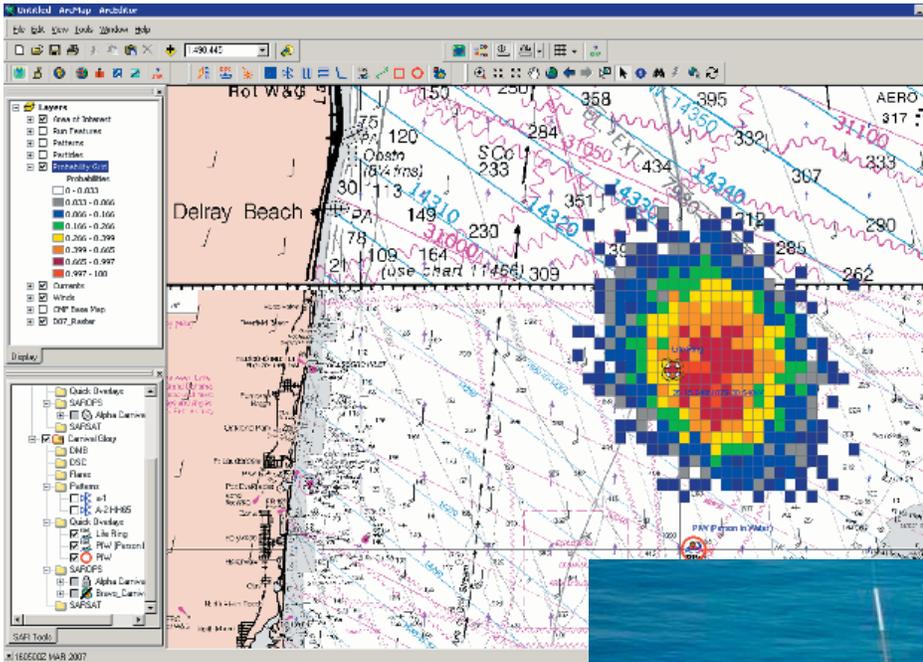


ON SCENE

The Journal of U. S. Coast Guard Search and Rescue

This Issue: New SAR Capabilities & Technologies





ON SCENE

The Journal of U.S. Coast Guard Search and Rescue
Summer 2007

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Notice to librarians:

The last issue published was the Fall 2006 edition.

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A Note from the Chief of Search and Rescue...

Captain Scott LaRochelle
Chief, Office of Search and Rescue



In the post 9-11 environment, some may wonder how relevant Coast Guard legacy missions are today. After all, for 211 years SAR was clearly mission #1. Our rich heritage is ripe with legendary tales of heroic deed and call to action dating back to the likes of arguably the Service's greatest lifesaver Joshua James, the founder of the Life Saving Service, Sumner Kimball and Captain Richard Etheridge's Pea Island Life Saving crew. However, over the past six years, SAR has shared the spotlight alongside Homeland Security, which rightly so has taken its place of prominence in the Coast Guard mission suite. So how relevant is Coast Guard Search & Rescue in 2007?

Don't ask me, I'm biased. Why not ask the father, son and two friends whose 17-ft pleasure craft overturned in the frigid 48 degree waters of Chesapeake Bay on March 25, 2007 and were rescued by a Sea Tow boat crew who overheard the Mayday and got underway to assist as part of a comprehensive Sector Hampton Roads search effort? Or how about the Brit, Frenchman and Canadian aboard the sailing vessel *Sean Seamour II* after it capsized and sank in 45-ft seas during Tropical Storm Andrea some 200 miles off the North Carolina coast on May 7, 2007? Through the rock steady Cospas-Sarsat program's receiving of the 406 MHz distress alerts, an aircrew from Air Station Elizabeth City successfully pinpointed the location and rescued the distressed sailors. Or finally perhaps the Chinese mariners aboard the ill-fated cargo vessel *Hai Tong # 7* that capsized 375 miles NW of Guam on July 10, 2007? District 14 capitalized on another unsung SAR program, Amver which arrived first on scene successfully rescuing eight mariners. One crewman from an Amver participating ship whose ship's motor lifeboat was damaged actually jumped overboard into the raging 30-ft seas to rescue a fellow mariner.

Cases such as these play out across the Coast Guard *every single day*. And with the tried and tested capabilities of Cospas-Sarsat and Amver continually paying dividends, along with our new capabilities including SAROPS and Rescue 21, and with revitalized partnerships of the many other capable maritime response agencies and organizations – the future of SAR has strong reason for optimism.

That's not to say we have no gaps. We do, and we're presently addressing them. Managing a SAR case requires a combination of part *science* & part *art*. The National SAR School provides tremendous instruction in covering the *science* of SAR. The *art*, however, is one of those intangibles that comes from experience, time on the water and possession of an innate understanding of the maritime environment. Following our conversion of SAR controllers from BM1/QM1s, many of today's OS Operations Unit watch standers are smart, forward leaning, and quick to grasp new concepts (i.e. the *science* of SAR). But they're also young, inexperienced in CG operations, and lacking the *art* that I mention above. We're aggressively looking to mitigate that gap on two fronts – by partnering with Boat Forces School at Yorktown to include small boat ops in the SAR School curriculum and taking a round turn on OJT requirements at the member's unit. Until we fully close this gap, I encourage District SAR managers and Sector Commanders to seek out those opportunities for sustaining the *art* of SAR.

So if you're asked if SAR is still relevant in today's Coast Guard, I hope you will answer like I do – “you bet it is.”

Semper Paratus...

From the Assistant Commandant for Response

Rear Admiral Wayne Justice



Shipmates,

As this issue of *On Scene* highlights, the Coast Guard continues to invest in search and rescue technologies to enhance mission execution and maintain our SAR preeminence. In addition to investments in our infrastructure and capabilities, the Office of Search and Rescue continues to pursue an aggressive international SAR engagement strategy. That strategy includes the development and negotiation of SAR agreements with nations whose SAR Regions border the United States' region. Pursuing these agreements is a high priority and a first step in developing mutual cooperation and coordination in the Coast Guard's execution of international SAR operations. Our Amver program continues to implement a dynamic international marketing strategy throughout the world. Its success is reflected in a continuous increase in the number of Amver ships "on plot" and available for use by all Rescue Coordination Centers worldwide. An outstanding example of how important Amver has become to the worldwide maritime community was on July 10, 2007, when the M/V HAI TONG 7 sank 370 miles northwest of Guam. Despite hazardous sea conditions, ten Amver ships diverted to help rescue and recover sixteen of the HAI TONG 7's crew. Work also continues with the International Maritime Organization and the International Civil Aviation Organization to help other nations organize and develop national search and rescue systems. Particular focus has been placed on regional cooperative efforts, mass rescue operations and passenger vessel safety which continue to be a concern throughout the international SAR community. Finally, the Coast Guard has been actively involved in the marketing and development of the next generation of the SARSAT (Search and Rescue Satellite Aided Tracking) system, called the Distress Alerting Satellite System (DASS), which will use the next generation of Global Positioning System satellites. All these international initiatives will directly and indirectly support our Coast Guard's SAR mission and our ability to support maritime lifesaving worldwide.

Our search and rescue mission has a proud heritage and tradition of excellence. It remains a core mission of our service. We will continue to invest in equipment, training and doctrine, but the true highlight of our search and rescue system will always be the men and women who perform the mission. It is our people that make us -- Semper Paratus! Keep up the great work!

RDML Wayne Justice

In Memorium

SAR Community Says Goodbye to a Teacher and Dear Friend

By Mr. Chris White, National Search & Rescue School

Take a moment. Think back on your life so far. Have you made a difference? Are others better off because of what you've done? Have you made your mark on this world? They say for your life to count for something, you should leave it in a better state than you were given it.

How many of us can truly say we've made an impact on this world? That we've actually contributed to mankind and the well-being of others? Well, there's one man that has done just that.

On November 15th, 2006, the National Search and Rescue School and SAR community lost a valued teacher, mentor, lifesaver and dear friend, Norman G. Heller (referred throughout the SAR community as Norm). Norm succumbed to a heart attack at the age of 74 while playing tennis at the Indian Creek Yacht club where he was a member and served as Rear Commodore.

Norm was a man who lived, loved and laughed with his family and friends. He was active in outdoor activities - known for playing tennis and kayaking with his wife Betsy. Family was very important to Norm. He always looked forward to their family reunions. You can visit Norm's family's web site where the Heller Family proudly displays an extensive photo gallery of their family events.

Norm also loved boating. He carried a 100 ton commercial operators license and owned a 1985, 42 foot Kadey-Krogen Trawler "SERENDIPITY", where you could often find Norm and his family and friends cruising the Chesapeake Bay - that is when he wasn't underway training with his Coast Guard Auxiliary crew.

Norm began his Coast Guard career as an Electronic's Technician from 1952-1956 where he served aboard the USCGC Frying Pan Shoals Lightship. Norm also served as an Instructor at Coast Guard Training Center Groton Long Point.

After 4 years in the Coast Guard, Norm moved on to become a college student at Georgia Tech where he graduated with honors and received his Master's Degree in electronic engineering.

After finishing college, Norm found himself working with Norfolk Southern Railroad where, like every other experience Norm embraced in life, he excelled. Norm retired as a Senior Executive with the Railroad.

Upon retirement, Norm & Betsy moved to White Stone, Va. where they built their home on Jack's Cove.

Finding himself at the end of one road, Norm set out in a new direction... the Coast Guard Auxiliary. Norm spent 14 years with Coast Guard Auxiliary Flotilla 33 in Kilmarnock where his commitment to the Auxiliary was demonstrated as he served as



Norman G. Heller

When asked why he put so much time into his work, he replied with a strong belief and conviction "I'm saving lives".

Flotilla Commander in 1998-99. Norm also served as a qualified examiner - verifying the qualifications of auxiliary boat crews and is remembered throughout Auxiliary Flotilla 33 for providing in-depth quality boat crew training. His strong convictions in the Coast Guard Auxiliary and their lifesaving role resulted in his becoming known for strict compliance with the boat crew qualification process, always striving for improvements in his boat crew's skills and proficiency. In referring to the qualification times, Norm is quoted for saying "that time was good... but we can do better."

What most people outside of the Fifth Coast Guard District did not know was that Norm was the only Coast Guard Auxiliarist holding qualification as Command Duty Officer at Sector Hampton Roads. During the transfer season of 2005, Norm stood port & starboard watch as one of only two qualified CDOs at Sector Hampton Roads.

Without a doubt, Norm is most remembered within the SAR community for his position as an Instructor at the National Search and Rescue School located at Training Center Yorktown, Va. Norm played an active role in the day-to-day instructional events of the SAR School and taught classes within the three week resident Maritime Search Planning (MSP) course.

With a twinkle in his eye and a smile on his face, Norm would introduce himself to each new group of SAR School students as “having been an ET instructor back when the ET School was at Training Center Groton, Connecticut – a place that has been decommissioned long since before any of you were a gleam in your parent’s eye”.

Norm also assisted in the training of SAR Supervisors as well as the field training of the Search Coordination & Execution (SC&E) courses held throughout the country - always bringing that special flair only he could provide.

Some of Norm’s lasting contributions to the SAR community and the SAR School are his ability to simplify complicated concepts such as SAR Theory. Norm’s ability to simplify the complicated mathematical concepts of Probability and the Monte Carlo drift simulation model by relating them to the number of chocolate chips distributed throughout a batch of chocolate chip cookies was priceless.

Norm’s expertise in mathematical theory as well as his operational background was instrumental during the developmental stages of the Search and Rescue Optimal Planning System (SAROPS) search planning software. He was one of three SAR School representatives attending the development meetings involving C2CEN, the Research and Development Center, SAR School and Northrop Grumman. Norm’s keen insight from an operational aspect helped to correct and create aspects of the SAROPS program of which the entire Coast Guard SAR community is using today. In recognition of his efforts, Norm received the Meritorious Team Commendation (posthumously).

When asked why he put so much time into his work, he replied with a strong belief and conviction, “I’m saving lives”.

Norm made lasting impressions on all who knew him and his time with the Coast Guard certainly made significant and lasting contributions to the SAR Community as well as the SAR School.

Norm leaves behind his wife Betsy, sons Jeff & Randy, daughter Kathy and his 5 grandchildren Scott, Nicholas, Kevin, Ellen & Jack

Norm. We know you’re keeping an eye out for us. You were a dear friend to us all and you are missed. Farewell and following seas.



The National SAR School’s Computer Simulation Center Lab room was recently named in Norm’s honor. The Normal G. Heller Memorial SAR Planning Development Center (a.k.a. the “Pressure Cooker”). The plaque is viewed by all who enter the lab room.

Aviation Gears Up For Search And Rescue

By LT Tracy Nixon, USCG, Office of Aviation Forces

Coast Guard aviation has been tasked with numerous new missions in the post 9/11 era. Our crews now perform Airborne Use of Force (AUF), Rotary Wing Air Intercept (RWAI) & Vertical Insertion (VI) operations in response to potential terrorist threats and to ensure our national security. Despite the new mission requirements, traditional missions including Search and Rescue (SAR) remain our core function and we need improved systems to allow us to do it all.

Both legacy and new aircraft are being upgraded with increased capability to meet a wide range of challenges. We've seen Coast Guard aviation respond over the years to many significant SAR (Search and Rescue) cases, Mass Rescue Operations (MRO) and humanitarian challenges. The Coast Guard aircraft fleet continues to undergo a dynamic transformation. Coast Guard rotary wing platforms are changing from HH-60J to MH-60T and HH-65B to MH-65C. HU-25A/C/D patrol aircraft are being retired as the new HC-144A Medium Response Surveillance (MRS) aircraft and C-130Js are added to the list of Maritime Patrol Aircraft (MPA) that includes the venerable HC-130H Long Range Surveillance aircraft. The avionics and electronics inside of the aircraft also continue to change.

New SAR enhancing capabilities are working to take the search out of search and rescue. Legacy aircraft have long used the DF-301E and ANS-4 Direction Finder (DF) and homing systems to locate the source of distress signals such as the VHF-AM 121.5 MHz, UHF 243.0 MHz and VHF-FM 156.8 MHz (channel 16) to locate downed aircraft, mariners, personnel, and ships in distress. A change in the technology now provides the means to receive Emergency Position-Indicating Radio Beacon (EPIRB) with Global Position System (GPS) based position signals in the aircraft. The new DF-430 system funded by Deepwater allows Coast Guard aircraft to receive EPIRBs with GPS positions or to home on the 406 MHz signal itself providing a line of bearing directly to the location of the active beacon. The advantage of Coast Guard aircraft having this DF capability can be expressed in one



C-130 crewman searching from ramp. Official Coast Guard file photo.

word – range. The higher you operate the DF antenna the more range of detection and area coverage you can achieve.

On 12 Jun 05, 10 separate aircraft, 18 sorties, 19 search areas, and 13,118 sq. miles were expended to locate the 34' pleasure craft *Extractor 26* miles off the coast of Florida. After thousands of miles of cumulative search effort, a Coast Guard C-130 aircraft launched from Elizabeth City, NC (with a DF-430-F prototype on board) en-route to the assigned datum. While still 90 nautical miles from scene, at 17,000 feet, the DF-430-F locked onto an Emergency Position Indicating Radio Beacon (EPIRB) signal. The C-130H aircrew flew directly to the new electronic intercept solution and located two hypothermic survivors clinging to the bottom of an overturned craft, thus ending a 20 + hour search. An HH-65 helicopter was vectored to the position and hoisted the two survivors to safety. These two survivors had been holding onto the bottom of the boat for over 24 hours. All Coast Guard aircraft are being rapidly upgraded with this new capability.

When a Coast Guard aircraft launches on a SAR case, regardless of weather or time of day, they go out prepared. Every Coast Guard aircraft has search radar. The radar allows the crew to navigate through weather, avoid terrain and obstacles, and most importantly locate downed aircraft or mariners in distress. The Coast Guard Office of Aviation Forces is currently working on upgrading radar systems on five platforms. The new multi-mode radar systems use advanced software and new technology such as the Active Electronically Scanned Array (AESA) similar to Joint Strike Fighter (JSF) technology. The radars can provide surveillance and detection capability regardless of day or night and in all weather conditions.

One of the active modes in the new systems allows the radar to detect a Search and Rescue transponder (SART). The Safety of Life



DF-430 406 MHz direction finding system



Search & Rescue Transponder

at Sea (SOLAS) Convention requires SARTs to be carried on board certain class of commercial and passenger transport vessels. These vessels are required to have 2 SARTs, one on each side of the vessel that can be removed and taken aboard the life boats or survival rafts. A SART works in the 9 Ghz frequency range and when activated by a radar pulse it transmits a response signal that is displayed on X-band radars in the form of 12 dashes or dots. SART signals provide the radar operator with a line of bearing to the beacon and distressed mariners. This means that an aircraft can transit and search a broad area, locate the SART, and provide or coordinate a SAR response to save lives.

In addition to SARTs, the radar's basic search capability allows it to detect and locate vessels, debris and other objects. Many times the only thing left to locate is a debris field where survivors may be fighting for survival. When searching over the ocean at 1500 feet and 100 to 200 nautical miles per hour, waves, weather, or the sun's glare makes small objects difficult to see and easily overlooked. The key is to locate the debris so you can get to the survivors, and radar provides a means of detection that is invaluable in this role.

At night, visual searches over water become a lot harder and more risky for the aircrews. Coast Guard aircrews are turning night into day using Night Vision Devices (NVD) and Electro-Optical / Infra-Red (EO/IR) sensors. Coast Guard helicopter crews train and fly with Night Vision Goggles (NVG) peering into a pitch black night with a set of green illuminated binoculars. The ANVIS-9 goggles amplify all ambient light from the moon and other sources and allow the crews to see people or objects in the water or on land.

Conversion of Ambient Night Light Into Enhanced Visible Light.

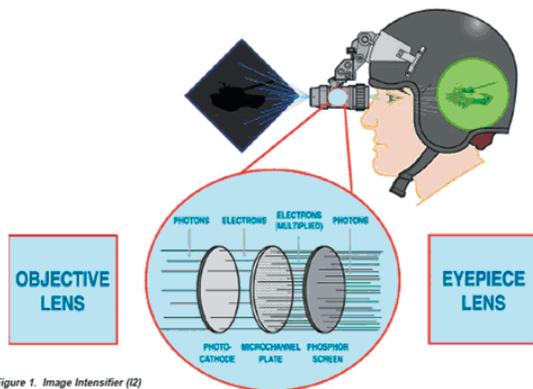


Figure 1. Image Intensifier (I2) Tube Operation.

In addition to NVGs, which are dependent upon some ambient light source, the Coast Guard employs Electro-Optical/Infra-Red (EO/IR) sensors with new state of the art technology that provides

high definition day time color imagery and night time infra-red and low light amplified images. The night time benefit of IR allows the Coast Guard to detect a person in the water, distress vessels and other lost or distressed personnel in a rural or urban setting. It can be dark, with no light source at all, and the EO/IR can provide a black and white picture based on thermal imaging of the surrounding area in the sensors field of view. The IR sensor can detect targets, such as a person in the water, and track them. IR sensors use the thermal signature and thermal differences in the surrounding area to paint a picture of the target area. The sensor offers a full range of movement. While in flight, the sensor can rotate 360 degrees in the horizontal plane and up and down in elevation to stay focused on the selected target of interest. Newer EO/IR systems are providing laser illuminators and designators. The laser illuminator provides an eye-safe laser light that is indiscernible to the human eye, but enhances low light illumination both for EO and NVG use.

The image in the national news on Feb 28th of 2004 was of the 570' Singapore tanker "Bow Mariner". A vessel fire caused it to sink off the Virginia coast at night. The EO/IR equipment on a HC-130H aircraft recorded the final moments of the vessels demise and led to the recovery of the survivors. The HC-130H aircrew used the Radar and EO/IR to quickly locate the sinking vessel's stern above the water line and then located the life raft. The sensor operator determined someone was in the raft with the EO/IR and radioed the enroute HH-60J to proceed directly to the raft location. In the dark night the HC-130H continued to scan the area with the sensors looking for survivors. The helo quickly picked up the survivors demonstrating the value of the EO/IR for SAR.



EO/IR image of the Bow Mariner taken by C-130 rescue aircraft.

Automatic Identification System (AIS) is being added to Coast Guard aircraft. The AIS system allows the aircrew to see and monitor all commercial shipping in an area within line of sight of the aircraft. According to the International Maritime Organization (IMO) Safety Of Life At Sea (SOLAS) agreements, AIS shall be fitted aboard all ships greater than/equal to 300 gross tonnage for international voyages. One estimate had over 40,000 ships currently fitted with AIS. For an aircraft at 1500 feet that means it can detect AIS contacts as far as 50 nautical miles away from the aircraft. For SAR, this means that large ships like the *Prinsendam*, *Bow Mariner* or cruise ship *Ecstasy* will have AIS transponders transmitting their identification, location, course and speed directly to the aircraft. In the case of a medical evacuation, long range SAR

or sinking vessel time matters. This information allows the aircraft to fly directly to the position of the vessel or in a worst case to the last know position transmitted and respond accordingly. AIS can also transmit a text message letting all other AIS equipped vessels and aircraft in the area know where it is located and that it is on a SAR case. A Coast Guard aircrew could easily locate a distress vessel and summon help from a nearby AIS equipped commercial vessel – hailing them directly to respond. The HC-144A was the first Coast Guard aircraft delivered with AIS. The C-130J and HC-130H are being upgraded with AIS now. Portable AIS units have been prototyped and carried on Coast Guard aircraft and proven very effective.



The Coast Guard's newest aviation platform, the AIS equipped HC-144A.

One of the most impressive developmental projects has been the VHF Digital Selective Calling (DSC) capability. No aircraft has had this capability. Meaning that when a GMDSS VHF-FM channel 70 distress message is sent, aircraft could be directly overhead and not get the message until someone from a vessel or shore unit relayed the call to the aircraft. Aircraft Repair and Supply Center (ARSC) Elizabeth City combined forces with Wulfsburg to develop a SAR module that can be plugged into the RT-5000 transceiver allowing continuous channel 16 and channel 70 guard operations. This means a swifter response to distress calls and the ability to extend the range beyond the horizon off shore. The aircraft can become a mobile repeater tower for the Rescue Coordination Center (RCC) and other DSC equipped units. The DSC signal provides the ship's position, time, identity, Maritime Mobile Service Identification (MMSI) number, and nature of distress with a push of the button on the ship.



Wulfsburg RT-5000 transceiver allows continuous distress monitoring of marine band channels 16 and 70.

The RT-5000 radio also provides direct two-way protected voice communications with first responders. In an event like 9/11, Hurricane Floyd or Katrina



it is critical to have direct communications with local, state and federal EMS, fire, rescue and law enforcement agencies. With this radio Coast Guard aircrews will have the ability to utilize mutual aid or in some cases local frequencies and radio systems to coordinate response operations.

Coast Guard aircraft retain UHF-AM, MILSATCOM, VHF-AM and HF military communications capability that allow the Coast Guard to be a communications bridge between the Department of Defense and local responders. The total avionics packages in Coast Guard aircraft are geared to support SAR operations. The global navigation package is designed to have high reliability providing performance based in-flight navigation.



Coast Guard aircraft have Global Positioning System (GPS), inertial navigation units, combined with state of the art Flight Management Systems (FMS) to guide them through the dark and stormy nights. Digital map and aircraft tracking systems are being added to increase the ability to respond off shore and on shore to



any disaster or emergency incident. The new MH-60T avionics upgrade replaces approximately 98% of the legacy avionics systems. The new MH-60T helicopter is receiving the Rockwell Collins' Common Avionics Architecture System (CAAS) combined with advanced communications, navigation, flight safety and Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) equipage designed to meet modern SAR mission demands.

Coast Guard aircraft are marching in a direction to respond faster and to be more effective with new technology at its disposal. Research and development continues to plan and deliver the future capability needed to protect the lives, property and interests of the United States and the maritime community. Every aircraft in the fleet is undergoing some sort of upgrade and new aircraft are being brought on line to meet the SAR mission challenge. The best way to put it is: "Aviation is gearing up for SAR."

Small Boat Standardization

SAR and Beyond

By PA1 Mike O'Berry, USCG



The new 45-foot Response Boat - Medium will begin replacing the 41-foot utility boat next year.

The Coast Guard is replacing its aging fleet of non-standard boats with multi-mission vessels that have common systems and effectively meet the increasing demand for highly capable, technologically advanced platforms — and delivering them faster than ever.

“A mixed bag.” Five years ago, that was probably a good way to describe the Coast Guard’s small boat fleet. That’s because historically, areas and districts purchased their own boats, resulting in a collection of vessels that shared little more than Coast Guard identification.

Then, around 1999, the Coast Guard began to “standardize” small boats. When completed, the Coast Guard will go from hundreds of different small boat types to fewer than 10 – a move that promises improved mission readiness and effectiveness.

The goal of the Office of Boat Forces at Coast Guard Headquarters is to replace aging non-standard boats with crafts that effectively meet the Coast Guard’s expanding operational needs and features across-the-board standards in navigation and communications equipment.

“Standardization allows for highly flexible operations,” Capt. Scott Robert, Chief, Office of Boat Forces, said. “So when a BM3 goes from the station to support a contingency operation, he already knows how to operate that small boat.”

As such, an immediate benefit with standardization is the reduced training time for boat crews.

In the past, mission readiness and execution was one of the casualties of having a multitude of different small boat types. Coxswains and boat crews would inevitably need to spend the early months of their new assignments getting trained and familiar with station- or cutter-specific boat types. But now, those crewmembers won’t need to go through extensive familiarization.

“Even though it may be a different hull-type, for the operator, that’s transparent. Looking strictly at the operator going from unit-to-unit, if he knows how to operate that chart plotter on the over-the-horizon cutter boat, (when) he gets on the station defender class boat, it’s the same thing,” said Cmdr. Austin Gould, Chief, Office of Boat Forces Platform Division.

Robert says, both shore-based and cutter-based small boats will have the same standardized equipment, making operations even more effective.

“For example, an MSRT (Maritime Security Response Team) gets called to intercept and board a vessel offshore, but it’s too far out to take their shore-based boats. Because the MSRT operates the same boat type as the cutter, they can be shuttled out and use the cutter boat without having to rely on the cutter boat crews to be trained in those boarding team delivery tactics,” he said.

“Standardization improves mission execution and asset availability,” said Robert. Furthermore, Robert says, standardization lessens the amount of sparing, effectively reducing ownership costs, and fostering a culture of preventative and corrective maintenance vice casualty response.

Remarkable Requisition

More impressive than the mission readiness aspect may be the time it took to acquire the newest vessel in the standardized fleet.

Going from zero to 50-plus knots in eight months may seem pretty slow if you’re pushing a throttle, but when you’re describing the time it took the Coast Guard’s Office of Boat Forces to deliver the newest tool in migrant and drug smuggling interdiction, it’s practically supersonic.

In the past, it may have taken three-to-five years to put an asset like the new 33-foot Special Purpose Craft — Law Enforcement small boat into operation. But thanks to the Department of Homeland Security’s Boat Commodity Council and a continuing emphasis on quickly providing the right tools to do the job, the Office of Boat Forces was able to get the speedy craft on the water in less than one year.

Shortly after the Department of Homeland Security was stood up, senior management saw the need to coordinate certain activities across agencies, specifically looking to save money through strategic sourcing and joint procurements with groups called commodity councils. The goal, according to Gould, is that by pooling resources for common items like copiers and boats, DHS can operate smartly and save money.

The Boat Commodity Council, in particular, was formed to look at how DHS agencies that operate boats (Coast Guard, Customs and Border Protection, Border Patrol and the Federal Law Enforcement Training Center) buy, manage, support and train on them. Gould said the purpose was to “identify efficiencies and perhaps save across the whole department.”

The first joint procurement within the DHS Boat Commodity Council was the 33-foot SPC-LE, built by Safe Boat International. According to Gould, as CBP developed a plan to buy high-speed, shore-based intercept vessels, the Coast Guard’s 7th District also showed a need for a boat with similar characteristics. Once a collaborative requirements document was agreed upon, the council granted the Coast Guard the ability to purchase boats straight from the vendor on the CBP contract.

“From initial field commander identifying a capability requirement to actually getting those capabilities out to the field in meeting the threat, took less than a year,” Robert said. “That’s a win for improved mission execution!” he added.

“It (SPC-LE) was the first resource that I’ve needed during an operational tour that the Coast Guard delivered while I was there,” said Capt. Phillip Hyle, the Sector Key West commander when the first SPC-LEs were introduced in Key West last February.

“They (Office of Boat Forces) were extremely agile in getting it into the hands of our operators,” Hyle said. Speaking of the success and interest in the SPC-LE, Hyle said, “when you get a resource everyone else wants, you know you have the right formula.”

Across The Board Standardization

“We’re now not only talking standardized within the Coast Guard, we’re talking standardized within DHS,” Gould said.

“Today, the SPC-LE is a standard boat across DHS,” Robert added. “It was procured jointly and outfitted to meet all the agencies’ requirements. It’s how we’re buying boats today. Other agencies have the ability to tap in and buy boats off of a Coast Guard contract, or we can buy boats off another agencies contract.”

Now, before the Coast Guard buys a boat, it shares the requirements with the council. According to Gould, members provide input and the Coast Guard can make a minor adjustment to a requirement that would meet a mission need of a partner agency.

Additionally, the SPC-LE procurement provided the opportunity to deploy tactics that the Coast Guard hadn’t deployed in the past, said Gould. Borrowing heavily from CBP, who have very established tactics and procedures, a standard shore-based non-compliant vessel pursuit tactic was developed and used with great success in the Florida Keys.

“We’re not only standard with the boats, we’re standardizing the training and mission execution,” Robert said. “When we’re on scene prosecuting a case, from a DHS perspective, we’re across the board standard.”

New Inventory

The standardization effort began with the replacement of various motor lifeboats with the 47-foot MLB and the replacement of 360 non-standard boats with the 25-foot Defender Class boat. Additionally, the new 45-foot Response Boat - Medium will begin replacing the 41-foot utility boat next year.

And joining those ranks are two other boat types that demonstrate the Coast Guard’s commitment to putting the right capability in the right place for the right mission set: The new Trailerable Aids to Navigation Boat (TANB) and the Over the Horizon Cutter Boats.

According to Gould, the TANB is truly a high-performance workboat that during operational testing experienced a 50 percent increase in operational efficiency. “Instead of having to put up a ladder and scramble up it, you stand right on the cabin top, reach over and do your work,” Gould said. “It’s a tremendous multi-mission workboat.”

And because of the new speed and range of the TANB, crews are able to respond on the water at much greater distances. “Any time you can keep the boat in the water, that’s the way you want to go. You want to keep it off the trailer and off the highway,” Robert said.

Replacement of the current mix of aging TANBs was long overdue, said Robert. In February, American Marine Holdings, in partnership with Gravois Aluminum Boats, was awarded the contract to build up to 100 TANBs. Over the next five years, all existing TANBs will be replaced with the new, standard version.

The road to replace a wide range of cutter boats began as early as 1998 when the need for effective over-the-horizon boat operations became essential to interdiction operations.

The new CB-OTHs provide the essential end-game capability to the cutter community. In 2004, the Coast Guard awarded Zodiac an \$18 million contract to build up to 78 CB-OTHs.

Satisfying A Niche

Even with the move to standardization, the need for “niche” boats continues.

“As we move toward a standardized fleet, not all the standard boats fit all the mission activity that units are required to execute or the environments we operate in,” Robert said. What the field will see outside the standard boat inventory, says Robert, is a special purpose craft category that addresses law enforcement, ice, surf and shallow water needs.

▼ BOAT PLAN 2015 The move to small boat standardization began in 1999 with the replacement of various motor lifeboats with the 47-foot MLB and the replacement of 360 non-standard boats with defender class 25-foot response boats. Additionally, the new 45-foot medium response boat will begin replacing the 41-foot utility boat next year. By the year 2015, the Coast Guard will go from about 1,500 boats of varying types in 1999 to about 2,100 standardized vessels. Here’s a look at how some of those boats will find their way into the Coast Guard inventory.

1999 → **2006** → **2015**



CUTTER BOAT — OVER THE HORIZON (CB-OTH) MK II&III

The fast, long-range, highly-maneuverable boat is a key piece to successful interdiction efforts offshore. Both the fiberglass hull (MKII) and the aluminum hull (MKIII) boats feature the Furuno SINS package, Graytonics integrated crew communications systems and shockwave marine suspension seats. CB-OTHs will replace many of the existing cutter boats.

Length:	23 feet
Speed:	45 knots
Range:	200 nautical miles
Seas:	6 to 10 feet (survivable in 12 feet)
Crew:	5
Propulsion:	1 Yanmar 315 hp diesel coupled to a Mercury Brave 1x outdrive
Capabilities:	M240/M60 capable, transportable by C-130 aircraft, trailerable

According to Robert, the Office of Boat Forces is looking to standardize special purpose craft airboats, flood punts, near-shore lifeboats and shallow-water response. Additionally, plans are on the drawing table to develop a shore-based, offshore boarding delivery platform that will be able to take boarding teams from shore out a reasonable distance to do boardings.

And these boats will include standardized features that are consistent with other small boats throughout the Coast Guard fleet.

While the standardization position has been years in the making, it could be said that the lessons learned from Hurricane Katrina have justly vindicated the standardization logic.

Much of the success during Katrina was the ability of multiple aircrews to arrive on scene and conduct rescue operations in whatever air asset was available.

Through the standardization of the small boat fleet, regardless of which platform was “taken out of the bag,” the next coxswain in line is ready to go.



TRAILERABLE AIDS TO NAVIGATION BOAT (TANB)

Production to replace the aging 21-foot TANB began last February with an order to build up to 100 of the new workhorses of the Aids to Navigation community. The new standard 26-foot TANB boasts a multi-mission capability designed to bring versatility and speed to the ATON mission. The more than 100 square feet of working deck space includes the capability to work from the cabin top. Plus, it has an MK-16 Mod-09 Tripod Gun Mount to meet port, waterways and coastal security requirements.

Length:	26 feet
Speed:	38 knots
Range:	170 nautical miles / 10 nm offshore
Seas:	3 to 5 feet
Crew:	2 to 3
Propulsion:	2 Honda 150 hp outboard engines
Capabilities:	Davit with a working load limit of 500 lbs. 100+ square feet of working deck space, dive door

Cellular Technology Aids In Situational Awareness

By LCDR Rusty Dash and LCDR Richard Sundland

Technology is on the move like never before. Today, cell phones, MP3 players, personal digital assistants and Global Positioning Systems have found their way into the pockets and purses of many Americans. Understanding the benefits of technology and seizing the opportunity to use it can keep businesses, as well as individuals, competitive in a globally connected world.

Cell phones today can play music and video, take pictures and video, send e-mail and access the internet. The Coast Guard is taking advantage of that technology to increase situational awareness with the Cellular Phone Blue Force Tracking (CBFT). The CBFT technology won the 2007 Captain Niels P. Thomsen Innovation Award and gives the Coast Guard the ability to track assets every few minutes using cell phones. The CBFT phones have an embedded GPS transceiver that transmits the position of an asset (small boats, boarding teams, inspection teams or any other asset) within cell phone range to the Common Operation Picture (COP) at Sector, District, Area and Headquarters Command Centers. The asset's name/number, type, position, time, course and speed over ground are sent encrypted to the appropriate command center COP. This near-real-time position information can dramatically improve an operational commander's situational awareness. CBFT is very similar to the cell phones some parents use to track their teenagers.

The threats and missions of today's world require that an operational commander be able to continuously track their cutters, aircraft, boats, and personnel throughout their area of responsibility. CBFT provides that capability within the cellular coverage area.

CBFT can also add extremely valuable information to decision makers during a SAR (Search and Rescue) case. Consider the unfortunate and tragic deaths the Coast Guard experienced at Station Niagara in March 2001. One of the contributing factors to the incident was that the boat deviated from its sail plan and didn't inform the operational commander. Had CBFT been employed in that at the time, the Command Center could have quickly accessed the boat's last position. Obviously there is no way to know if the lives of those Coast Guardsmen would have been saved, however the Command Center would have at least been able to direct resources to search in the correct area.

The ability to monitor and document what portions of a search pattern were executed by a search response unit can improve



SAR mission execution. Currently, it is generally assumed that a search pattern is precisely followed and the geographic area in a search pattern is properly covered. Many factors, including the effects of weather and human control of the asset, invalidate this assumption. CBFT can show us what portions of the area were actually searched, which allows the adjustment of subsequent search patterns to adequately cover any gaps. This gives the Coast Guard the confidence and knowledge that we have in fact achieved the desired probability of success for a SAR case.

The Coast Guard intends to make this technology available to our port partners and first responders. Implementation of the necessary data exchange agreements with these agencies allows their asset position information to easily be included in the Coast Guard's Common Operational Picture. This will allow Command Centers to better allocate resources when responding to SAR calls. If the local Sheriff's boat is underway and near the incident, the Command Center controller can direct the closest asset to respond saving valuable minutes when a life is on the line.

CBFT is available for immediate use. Coast Guard units interested in this capability are encouraged to review COMDT message, DEPLOYMENT OF CELLULAR BLUE FORCE TRACKING (CBFT) DTG 241637Z APR 07 and contact CG-37RCC point of contact, LCDR Dave Arritt at (202) 372-2486.

Mobile Command Centers Put C4&IT On The Target

By LT Andre Whidbee, U.S. Coast Guard

Minimizing the loss of life, injury, property damage or loss by rendering aid to persons in distress and property in the maritime environment has always been a Coast Guard priority.

Coast Guard SAR (search and rescue) response involves multi-mission stations, cutters, aircraft and boats linked by communications networks. As a result of expanded mission requirements, in 2002 the Coast Guard decided a system was needed which would fill the capability gaps of the current mobile communications response assets. This system is currently in production and is called the Mobile Communications Center (MCC) project. The MCC is a set of mobile and portable assets designed to provide the Coast Guard with on-scene Command, Control, Communications, Computers, and Information Technology (C4&IT) support during contingency, continuity and surge operations. The MCC was developed using the *system of systems* design concept to support an array of duties while maintaining interoperability with Coast Guard and Other

The MCC is a set of mobile and portable assets designed to provide the Coast Guard with on-scene Command, Control, Communications, Computers, and Information Technology (C4&IT) support during contingency, continuity and surge operations.

Government Agency (OGA) partners. Under this *system of systems* umbrella, each asset can be deployed independently to provide mission specific capabilities, or as a complete MCC system package to provide a complete C4&IT presence. Transportable C4&IT resources are vital to the success of the response oriented Coast Guard missions. The MCC system currently meets this need with four main assets: the Enhanced Mobile Incident Command Post (eMICP), Mobile Communications Vehicle (MCV), Portable Computer Store (PCS), and Portable Secret Internet Protocol Router Network (SIPRNet - pronounced "sipper net" (PS)).

The enhanced Mobile Incident Command Post (eMICP) is a trailer outfitted with temporary office and conference room facilities. The eMICP can be deployed alone or interfaced with the MCV to augment organic C4&IT capabilities. The eMICP provides a platform to conduct Coast Guard Command and Control, act as an incident command post, and support staff working an event. The eMICP is a conference room on wheels with a built in communications package to equip the conference room with Type I classified and Type III SBU (sensitive but unclassified) voice and data. The eMICP provides various communications systems along with twelve (12) work stations and a conference room table.

A tractor and a commercially licensed driver-team will tow the eMICP to any Continental United States (CONUS) location.

The Mobile Communications Vehicle (MCV) can be deployed independently to provide robust communications to an established command center, or to an ad hoc environment such as a hotel room. It is designed to interface with a command center or eMICP to enhance classified and unclassified voice, and radio (HF, UHF, VHF) communications as well as provide voice and data interoperability with Coast Guard units, state, local, and federal interagency partners. The vehicle was designed to be C130J transportable to both CONUS and Outside the Continental United States (OCONUS) locations.

The Portable Computer Store (PCS) is a contingency cache of six kits totaling 30 Standard Workstation III (SWIII) laptops and six routers which can be used to augment resources at a unit for surge operations, or establish a limited Local Area Network (LAN) in a temporary command and control facility. As a deployable kit,

each PCS provides the critical equipment necessary for users to access vital business and operational tools. Each PCS kit contains a 16-port Voice Protocol Network capable router, five SWIII laptop computers, and necessary power supplies. Users may directly connect the laptops to existing Coast Guard Data Network plus (CGDN+) connections in Coast Guard facilities, or access CGDN+ through the internet using remote access services. The router enables up to 15 machines to share a single data connection for access to the Internet or CGDN+. Each user must have a remote access token to facilitate CGDN+ access when not directly connected to a CGDN+

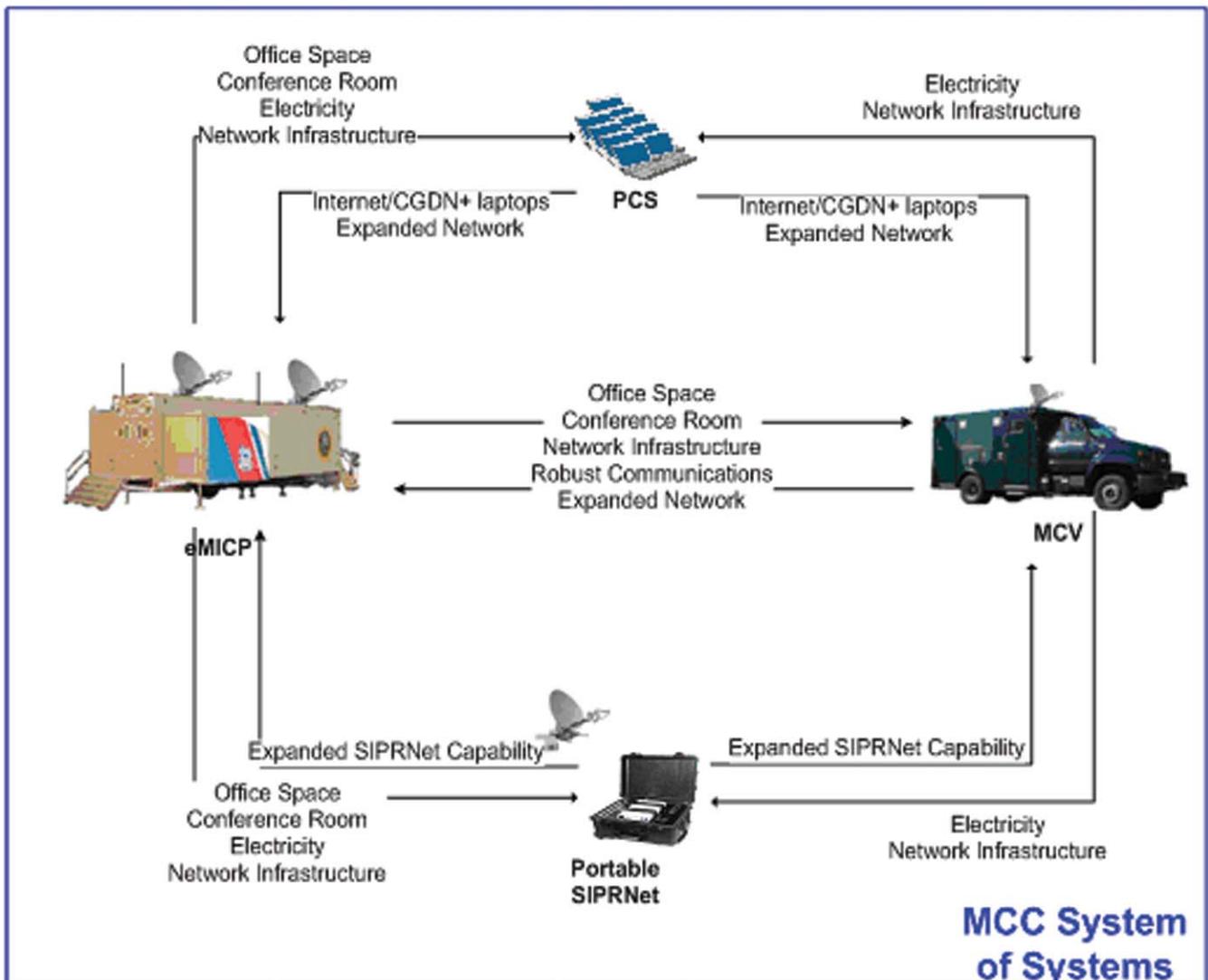
The Portable SIPRNet (PS) provides secure communications up to the level of SECRET. The portable SIPRNet asset consists of standard approved image laptops, a satellite terminal and network equipment necessary to provide connections to SIPRNet at remote locations. It is housed in flyaway cases that can be transported by two personnel as carry on baggage on commercial aircraft. PS can be deployed independently or as a module that plugs into the eMICP and MCV.

The National SAR Plan divides the U.S. area of SAR responsibility into internationally recognized inland and maritime SAR regions. SAR cases performed in remote areas may need additional deployable command and control (C2) capabilities not adequately met by the Coast Guard's fixed communications infrastructure. MCC assets would be used to extend Coast Guard planning and communications to responding assets.

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For example: Should a mass casualty search and rescue operation occur off the coast of Cape Cod, the MCV provides SAR planners the radio communications needed to communicate with Coast Guard and other agency's SAR assets. Meanwhile the eMICP provides a command post with organic Internet capabilities that allow SAR planners to research and discuss tactical decisions.

The Coast Guard anticipates the delivery of the first eMICP in November 2007 and delivery of the first MCV in the summer of 2008.



A New Era in Commercial Assistance

By Captain Terry Hill, Chairman of C-PORT

Marine Salvage - "A science of vague assumptions based on debatable figures taken from inconclusive experiments and performed with instruments of problematic accuracy by persons of doubtful reliability and questionable mentality." - Captain Charles A. (Black Bart) Bartholomew, a graduate of US Naval Academy, former Commanding Officer of the Naval Experimental Diving Unit, and Director of Ocean Engineering and Supervisor of Salvage at the Naval Sea Systems Command in Washington, DC.



A Safe Sea TowBoatU.S. towboat responds in rough seas to a call off the coast of Rhode Island.

Marine towing and salvage: this is the service provided by the nation's marine assistance towing industry. This industry operates under the regulation of the U.S. Coast Guard and all operators must be properly licensed to do so. Soon, their response boats will be regulated as well. Often times likened to pirates from the days of old, the marine assistance towing industry has developed into a valuable and necessary resource. How did it all begin?

Prior to the early 1980's, responding to recreational boaters' needs on the water was the responsibility of the U.S. Coast Guard. At the same time, the Coast Guard had many other responsibilities regarding fisheries, maritime shipping and trade as well as navigation safety. Recreational boating experienced a great expansion in the 1980's which over time placed a larger burden on the Coast Guard. During the Reagan Administration, a movement began to encourage privatization of many segments of government; the marine assistance towing industry was one of those segments.

One result of this privatization was the emergence of the modern marine assistance towing industry. Like many other trades in this country, the marine assistance towing industry created an association to provide collective representation on their behalf. C-PORT, the Conference for Professional Operators of Response Towing was formed. While the Coast Guard was striving to implement the congressional mandate to reduce government competition with private enterprise, a group of about 20 private

companies that were already providing some on the water towing services came together to present their case before a Congressional subcommittee. These founding members of C-PORT worked through the years with the Office of Search and Rescue with Captain Tony Petit and the Commandant Admiral Yost as well as Admirals Robbins and Matteson to develop the non-emergency addendum to the Search and Rescue policy which is known today as the Maritime SAR Assistance Policy (MSAP). C-PORT has worked closely with the Office of Search and Rescue since that time through Captains' Miller, Kinney, Sawyer and at present Captain LaRoche. In 1999 Capt. Kinney was instrumental in establishing the partnership between C-PORT and the Coast Guard Office of Search and Rescue.

The marine assistance towing industry started small, with operators being mainly "mom and pop" operations. Boaters that continued to hail for the Coast Guard when their engines failed began to find that a Marine Assistance Request Broadcast was issued to find help for them in non-life threatening situations instead of a Coast Guard vessel being dispatched to tow them. Boating organizations developed membership programs and marine insurance policies developed new coverages to help defray the cost of recreational boat towing and salvage.

Years of continued growth and development of the marine assistance towing industry followed. C-PORT continued to represent the industry in Washington while also establishing standards for professionalism and good business practices through its membership. Today, members of C-PORT subscribe to a code

of ethics and minimum standards for vessels and equipment. In addition, many C-PORT members are certified under the association's ACAPT Program, which involves specific equipment and horsepower requirements for various operational areas such as Ocean, Coastal, and Utility vessels. A risk management emphasis and training program has been implemented over the past two years and has proven extremely successful.

Presently, the marine assistance towing industry works closely with their local USCG stations assisting in all types of search and rescue operations. Sometimes, the assistance needed takes the form of radio communications. Substantial amounts of money are invested by the marine assistance towing industry in radio communications. The Coast Guard can depend on the industry to support them when distress calls cannot be heard clearly by their own coast stations.

An example of this cooperation occurred when a frantic ship captain issued a distress call, claiming that a mutiny was taking place onboard his ship. The Coast Guard could not hear the ship well as communications were broken and unreadable most times. With state of the art high site radio equipment, a local marine assistance towing operator assisted in relaying communications between the distressed ship and the Coast Guard. The ship captain reported stowaways who wanted to take control of the ship. He reported that they were holding the crew at gun point. Calm communication relay allowed the Coast Guard time to get on scene and defuse the situation. The District Commander was so pleased and appreciative of the radio assistance that the marine assistance operator was presented with a personally written letter of appreciation and a small token to commemorate the event.



Commercial providers and the Coast Guard in a drill scenario

In another example, there was a distress call from a 53' sport fisherman taking on water eight miles off the coast with seven persons on board. The Coast Guard deployed both air and water assets with ETAs of 6 minutes for a helicopter and 15 minutes for a SafeBoat. The local marine assistance company monitored the call as well, and, thanks to the Coast Guard watch stander's use of "active listening" (repeating the information of the call), all responders knew the location and details of the case. The marine assistance operator arrived on scene at about the same time as the Coast Guard assets. While the other responders promptly recovered the crew of the vessel, the marine assistance responder deployed pumps to stop the casualty from sinking. By the end of the operation, all persons had been safely rescued and the casualty

remained afloat. By working together, there was no loss of life or injury, a hazard to navigation and pollution were prevented, and property loss was minimized. Good radio communications and attentive dispatchers helped make this possible.

Today, the marine assistance towing industry is comprised of over 250 companies operating over 1500 vessels and employing hundreds of USCG licensed and qualified captains. Many of the company owners and captains are retired Coast Guard, police, or fire/rescue personnel who find the business rewarding. These are the companies which represent the major networks of TowBoatU.S./Vessel Assist and Sea Tow as well as an additional 40+ independent companies. Most of these companies operate year round, providing assistance 24 hours a day, 7 days a week. While much of this assistance is towing, salvage operations generate thousands of dollars of income for this industry. There are numerous salvage stories, but many start out like this:

At 7:26 PM, a marine towing assistance dispatcher hears a call on the VHF radio for a boat "taking on water". The vessel is an 85' yacht, valued at over \$3 million. The dispatcher alerts the duty captain, who immediately changes from dinner clothes to work clothes. His friends and family are used to last minute changes in plans. Time is always critical in a salvage situation. Bad weather can destroy even the best built yacht in a few hours. Knowing this, marine assistance captains always have a bag packed with extra clothes, foul weather gear and other essentials.

Once on scene, the Captain assesses the situation. Seas are 5-7 feet and winds SW 25-30 knots at the location of the casualty. The yacht is hard aground, portside to the beach, listing 30° to starboard with the starboard gunwale in the water. Efforts to secure the yacht immediately are preempted by weather. Working in unsettled conditions is the way of salvage operations. It took nearly a week to rescue this yacht.

A similar situation happened a few years ago that could have been catastrophic for a busy Florida port. A 116' yacht hit the rock jetty



The 116' luxury yacht Azimut on the rock jetty in Fort Lauderdale, FL

at the entrance to a major shipping channel. It was badly holed and taking on water. During the evening hours on March 16, 2005, a distress call went out from the crew. Hearing the call, all available marine assistance company assets in the area responded to the scene.

The salvage operation covered three days. The yacht was badly holed. Divers patched all accessible openings from the inside of the hull as well as from the outside. While the divers worked, pollution containment booms were placed throughout the area to protect the waters and the delicate turtle nesting areas found along the beach. All of the fuel was carefully removed from the vessel. Large diesel pumps were staged throughout the yacht and as the divers completed sections of patches, the pumps dewatered compartments of the yacht. This process helped reveal additional holes in the hull.

Work continued until the salvage team had patched all visible holes and the yacht was mostly dewatered. With the Captain of the Port and hundreds of by-standers watching, the Port was

to rescue this yacht. Many boats, salvage equipment and skilled crew were needed. Pollution concerns were foremost in everyone's mind and no one wanted the yacht to sink in the channel once it was freed. The Captain of the Port closed the shipping channel to allow the salvage team complete access during the removal of the casualty. Through the combined efforts of all involved, the operation was a huge success.

The marine assistance industry supports the Coast Guard and other law enforcement agencies in many life-saving efforts, as well. These marine industry professionals respond to reports of missing divers, bridge jumpers, and injured people routinely as a community service. Recognition has been given honoring many who have helped, but these people respond because it is their nature to help those in need.

From lifting a bleeding, unconscious boater into a waiting Coast Guard helicopter basket, to subduing a severely injured person who is flailing violently so that medical help can be administered, marine assistance operators are valuable resources in the Coast Guard's mission to save lives.

In today's world of increased risk, security concerns, and expanded missions, the Coast Guard is tasked with not only managing their mission of search and rescue response, but also developing new ways to increase and improve the maritime security of the nation. Now, more than ever, the Coast Guard must rely on partnerships and communication from the maritime stakeholders, responders, and resources throughout the nation.



TowBoatU.S. & Sea Tow work together to prevent Azimut sinking in shipping channel.

closed to all boating traffic as the tugs attempted to remove the vessel from its strand. Five tugs carefully maneuvered and finally freed the yacht from the rocks.

Knowing that it was a possibility that the yacht would begin to take on water after being freed from the rocks, two teams of divers stood ready. As the vessel cleared the rocks, the Salvage Master onboard the casualty received reports from the salvage team that the yacht was sinking rapidly. Immediately, divers were deployed to find and patch the remaining holes that had been hidden and inaccessible while the casualty was aground. The team worked diligently, divers patching and pumps dewatering, until the yacht began to level out and the water level inside her subsided.

This operation involved the cooperation of many diverse organizations, both public and private. Before salvage operations could begin, the passengers and crew of the yacht had to be removed. Circumstances existed that prevented an attempt by the Coast Guard to remove these people using a helicopter. Permission was granted for the marine assistance professionals to rig a walkway for moving these people from the yacht over the rock jetty to safety. Three marine assistance towing companies worked together

In January 2007, C-PORT, along with the two major marine assistance networks of Sea Tow and TowBoatU.S./Vessel Assist and many independent marine assistance operators, met in St. Petersburg, Florida at their annual conference, which celebrated the 20th Anniversary of C-PORT. The conference was a huge success. USCG Captain Scott LaRochelle, Chief of Search and Rescue, was an honored guest and spoke of the great partnership which has developed over the years between the Coast Guard and the members of C-PORT. Capt. LaRochelle reaffirmed the commitment to this partnership and has been working with the C-PORT Board of Directors and Executive Director to find ways to improve the partnership, relations between the Coast Guard and the individual marine assistance companies, and to further expand the role the maritime stakeholders of the marine assistance industry have with the Coast Guard.

Captain Terry Hill is the Chairman of C-PORT - Conference of Professional Operators for Response Towing, a member of the Potomac River Rescue Association and owns TowBoat U.S. in Woodbridge, Virginia.

For more information, contact C-PORT at 1-866-598-5977 or e-mail Fiona Morgan Executive Director at Fiona@cport.us. Please visit our website at www.cport.us.

Search and Rescue Engagement

Advancing SAR Around the World

By Mr. Dave Edwards

Single-handed sailor from the U.S. in distress in the South Pacific... U.S. Coast Guard to the rescue... or so thought many U.S. citizens in early 2007.

The Coast Guard has done such a fine job of responding to people in distress that many have come to assume that it would be no problem for a U.S. Coast Guard helicopter or boat to sail out a few hundred miles (2-days steaming by a ship) off the coast of Chile. When gazing at the world chart of the Search and Rescue (SAR) regions, many can be awed by the massive segments of the North Atlantic and Pacific Oceans within which the U.S. (and carried out by the U.S. Coast Guard) has agreed to coordinate SAR operations. It is well known that we reach out beyond these regions to help our neighbors, as best demonstrated in the Caribbean and western Pacific. However, it should be equally understood that the Coast Guard covers our own SAR regions in a manner that has become an international principle for providing SAR services – use all available resources. These resources include U.S. designated SAR units and non-dedicated government facilities; use of commercial, private, and volunteer resources; and, possibly the same types of resources from other countries. Best use of these resources is attained by having partnerships and arrangements, domestic and international, in place *ahead* of the distress.

So what happens when U.S. citizens travel abroad, as do many millions each year on business, pleasure and adventure? The U.S. should do as other nations do for their citizens traveling towards the U.S. – rely upon the nation with the SAR region to provide SAR services. Thus are born two primary reasons for SAR engagement: (1) when “coordinating” SAR within our own SAR regions, there will be times when we, as an agency or as a country, do not have adequate and timely response resources; and (2) for countries beyond our own SAR regions, we have a vested interest and humanitarian concern to enable those countries to provide SAR services.

For the U.S. Coast Guard, SAR engagement occurs on many levels – internal, local, national and international, and it is conducted with a wide range of public, commercial, and private organizations. Focus of this article will be more on the international and national level with the understanding that there is daily “engagement” on the local level.

In recent years the global community has greatly expanded in both desire and capability to provide SAR services. In many countries with lesser SAR capabilities, there are international initiatives to develop solutions. The U.S. Coast Guard, with a well-established reputation for SAR, is one of the most sought after agencies (but not the only one) by international organizations and individual



countries trying to establish SAR systems or to improve existing ones. Initially, this engagement appeared overly focused on one-time training or providing a facility, such as a boat and initial training, but follow-through was weak since the Coast Guard was not funded nor staffed to sustain such an effort. SAR engagement has evolved and now encompasses: (1) encouragement of regional cooperative efforts since a single country alone often does not have the full capability; (2) advice and guidance on government processes to sustain a SAR system; (3) recurring operational contact as able; and, (4) expectations that progress will be made over time.

The Federal Aviation Administration (FAA), the Department of Defense (DOD) and the State Department actively seek to have the Coast Guard engage in international forums for SAR. The FAA is primarily concerned with aeronautical SAR over water. DOD and State Department see SAR as a means of non-threatening U.S. engagement with a wide range of countries, friendly and sometimes not-as friendly.

The Coast Guard Commandant has signed several documents whose purpose is to provide guidance for U.S. Coast Guard strategic engagement with various regions of the world, including the Caribbean and Central America. SAR is a prominent component of this strategic engagement.

An international SAR agreement is an area of engagement led by the Headquarters SAR Program staff (they have the authority to negotiate international agreements) in partnership with Coast Guard District staffs. These agreements may be signed at the agency (Coast Guard), Department, or higher government level. With U.S. SAR regions being adjacent to 28 other SAR regions or countries, a SAR agreement should be in place with each to allow for operational arrangements and procedures. It should also prescribe collaborative efforts such as exchange of visits, joint exercises and training. These collaborative efforts provide the opportunity for interaction other than just for distress situations.

For the Coast Guard to have an active international engagement effort it must sustain a solid foundation at home. While the local Coast Guard field unit and District naturally engage the local responders, industry and citizens, Coast Guard Headquarters SAR Program has staff assigned to conduct engagement on the national and international level. The staff does a lot of engagement with other Coast Guard Headquarters program offices especially in the area of passenger vessel safety. All of this is done to help field units in the performance of SAR operations.

The top level of U.S. national SAR engagement and cooperation could be considered as the National Search and Rescue Committee (NSARC), the federal-level committee chaired by the Coast Guard and established to coordinate civil search and rescue (SAR) matters of interagency interest within the U.S. It oversees the National SAR Plan and the interagency guidance for its implementation. The National SAR Plan and the National SAR Supplement (NSS), which implements the National SAR Plan provide the framework for Coast Guard coordination with federal and local SAR resources. Attaining the goals of NSARC requires active outreach and participation by all federal partners. 2007 will see the signing of an updated NSP and revision of the 1999 edition of the NSS.

National engagement with commercial and private resources is an ongoing effort and in many forums. For example, the Coast Guard works with the passenger vessel industry through its Passenger Vessel Safety Program and also through its partnership effort with representatives of the cruise ship industry. Another means, used by the National Association for Search and Rescue (NASAR) for example, is to participate in the scheduled NSARC meetings as a non-federal observer. The Coast Guard has membership in NASAR and is quite active in its annual SAR conference along with other federal, state and local agencies and volunteers. (Field unit participation is encouraged in NASAR's SAR conference held in late May each year as posted at www.nasar.org)

To get a better picture of engagement on the international and national levels, some representative events are provided below. They represent a varied portrait and include both Headquarters and field level initiatives. By no means comprehensive, the examples nonetheless give a fair presentation that "Engagement" is an active responsibility amongst many partners.



ICAO/IMO JWG meeting held September 2006 in Singapore. 34 people, 16 countries, and 4 international organizations were active participants

- ICAO/IMO JWG – the short name for the International Civil Aviation Organization (ICAO)/International Maritime Organization (IMO) Joint Working Group on SAR: The global

community provides 8 maritime and 8 aeronautical SAR experts the opportunity to meet and develop operational and policy direction for direct submission to the international bodies which establish the international standards, practices and guidance material for SAR. The U.S. Coast Guard SAR delegate was elected Chairman of this JWG. (The US Air Force/AFRCC serves as an aeronautical (and land) SAR expert.) This is an excellent forum to initiate or introduce new SAR initiatives. For example, if you think that flares have outlived their usefulness as a distress alerting device then Coast Guard, upon gathering the facts and developing new policy, can then initiate the "change process" with the global community.

- Department of Defense Initiatives: SAR is viewed as a positive topic for DOD's Combatant Commands to engage other nations within their overseas area of responsibility. The Coast Guard often serves as the "Civil SAR Expert." Distinction is clearly made between "civil" SAR and "combat" SAR, nonetheless, civil SAR has consistently benefited from this joint effort. Regional effort has included the NATO SAR Panel as well as bilateral work with countries such as India and Vietnam.

- Asia-Pacific Heads of Maritime Safety Agencies Forum: Meeting sites for this annual event range from Korea to Chile and typically include around 20 countries. The next session will be April 2008 in Malaysia. The purpose of the Forum is to promote safe, secure shipping and a clean maritime environment within the Asia Pacific region by bringing together senior maritime officials to exchange ideas and identify areas of cooperation. SAR is a standard part of the proceedings.

- Pacific Island Nation SAR Conference: This is a new effort initiated by the 14th District/JRCC Honolulu in partnership with New Zealand, Australia and French Polynesia government officials, and the regional authority named the Secretariat of the Pacific Community (SPC). The goal is to improve SAR capability and capacity of the states in the region, especially the Island States. The first session, with at least 20 States scheduled to attend, will be in late November 2007 and biennially after that.

- Caribbean Search and Rescue Workshop: A recurring event organized by Sector San Juan, often funded by DOD Southern Command, and hosted by various countries in the Caribbean. Sector/JRSC San Juan is serving as the catalyst to develop regional cooperation and initiatives to improve SAR services in the Caribbean.

Though quiet in nature, engagement is a vital part of the U.S. Coast Guard's Search and Rescue Program. Reaching out and planning ahead with our neighbors – including other countries, responders, commercial enterprises, national, private and international organizations – ensures that the best use is made of all available resources to competently assist all persons, vessels or aircraft in distress. In the process of engaging to save lives we also help further larger U.S. government goals as well as promoting stability and the rule of law in many regions around the globe. Our Coast Guard has a global impact and SAR engagement is a key component.

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The U.S. and Canadian SAR Partnership

By Lieutenant Commander Paul Fawcett, USCG

The U.S. Coast Guard's Ninth District shares a lengthy maritime common border with Canada. As our neighbors and allies the Canadian Coast Guard (CCG) is our most common partner for Search and Rescue (SAR) in the region. Prosecuting SAR cases across the border has unique benefits and challenges for SAR agencies on both sides of the border. However, for all our daily interactions, many don't know as much about our Canadian partnership as we should.



Missions

The Canadian Coast Guard's (CCG) missions are similar in many respects to those of the USCG: Search and Rescue, Ice Breaking, Marine Traffic Services and Marine Navigation Services. The major differences between our two services missions are those of law enforcement and national defense. CCG vessels and personnel are unarmed and do not engage in direct law enforcement; however CCG assets are used to provide platforms for Royal Canadian Mounted Police and other agencies in the prosecution of their missions. Similarly the CCG interacts daily with the Canadian Navy, but does not take an active role in national defense.

On the Great Lakes, U.S. and Canadian mission overlap extends not only to SAR but also to ice breaking and maritime traffic services. We regularly cooperate in Operation Coal Shovel, the yearly ice operation for the Detroit River. Also the Marine Communications and Traffic Center in Sarnia, Ontario provides vessel traffic control for all vessels transiting through the international waterway of the Detroit River System.

Canadian Coast Guard Organizational Structure

The CCG is a division of Fisheries and Oceans Canada, much as the USCG is an agency contained within the Department of Homeland Security. For response purposes the CCG divides Canada into 5 major geographic regions: The Pacific Region, Central and Arctic Region, Quebec Region, Maritimes Region and Newfoundland Region. The regions are similar in scope and function to U.S. Coast Guard Districts. Canada is also divided into 3 Search and Rescue Regions: Victoria, Trenton and Halifax. Each region houses a Joint Rescue Coordination Center (JRCC) staffed by CCG (maritime coordinators) and Canadian Forces

(aeronautical coordinators) personnel that are responsible for command and control not only of maritime search and rescue but of aviation SAR as well. The CCG also staffs two Maritime Rescue Sub Centers (MRSC) in Quebec and St John's Newfoundland. The MRSC function similarly to USCG Sectors in that they provide direct SAR command and control for maritime SAR.

Canadian Small Boat Stations are scattered throughout the lakes and coasts, much like our stations, and may be seasonal in nature depending on weather. Inshore rescue boat stations are used strictly seasonally and are staffed by college students during the summer months and utilize rigid hull inflatable boats as their SAR asset.

Additionally, Marine Communications and Traffic Centers (MCTS) provide communications relay capability between stations and the JRCC or MRSC, but don't provide command and control.

In comparing the CCG and USCG structure, we have many parallels; our stations have similar functions and structures, as do USCG Districts and CCG Regions. The major difference is the presence of the USCG Sector layer between Stations and the District. In most cases in the CCG structure this doesn't exist and Command and Control at the stations comes directly from the JRCC to the stations.

Assets

The primary SAR asset for the CCG in most cases are cutters based at stations. However, the term "cutter" has a different meaning between our two organizations. In CCG terminology a "cutter" refers to 47' rescue boats (motor lifeboats (MLB) in the USCG vocabulary). These boats are built off the same blueprints as USCG

Motor Lifeboats with minor modifications. Unlike USCG MLBs, CCG cutters are named instead of numbered, similarly CCG cutters feature a “daughter boat”, a small inflatable boat mounted on the stern of the cutter. This provides another option for the cutter crew to reach distressed boaters. CCG 47’ cutters are painted red with a white stripe as opposed to the unpainted aluminum of USCG MLBs.

Canadian Coast Guard ships are considered secondary SAR assets and are deployed primarily for ice breaking, maintaining Aids To Navigation and other missions, but can be diverted as needed. Similarly, Canadian Forces vessels (Canadian Navy) and other government vessels, such as Fisheries and Oceans, can be diverted for maritime SAR if requested by the JRCCs.



Similar to its U.S. sister organization is the Canadian Coast Guard Auxiliary. These volunteer boaters, using their own platforms, respond to reports of boaters in distress as tasked by the Rescue Coordination Centers. Although they receive no compensation, they account for approximately 25% of the Canadian Coast Guard’s SAR response load.

While the CCG does have rotary wing assets, their primary purpose is not for SAR and they are not equipped with rescue swimmers or hoists. The primary aviation assets used for SAR are drawn from Canadian Forces Air Force. These assets include C-130 Hercules fixed wing and CH-149 Cormorant rotary wing aircraft.



Canadian Coast Guard People

Canadian Coast Guard employees are Civil Servants, divided into officers and crew. Officers may enter the service by attending the Canadian Coast Guard College located in Sydney, Nova Scotia. Officer Candidates attend a four year resident, collegiate level officer training program resulting in certification as an officer in marine engineering or navigation. Crewmembers must apply from civilian life and must have much of the training required to be a ships crewman prior to applying. There is no formal indoctrination program similar to the U.S. Coast Guard’s boot camp. Crewman may work their way up through the ranks to become a CCG officer.

Advanced training for CCG members, what would be referred to in USCG parlance as “C” schools, are held at the Canadian Coast Guard Academy (CCGA). These schools include training in environmental response, instructor training, marine engineering and management. SAR training offered at the CCGA includes:

- Maritime Search Planning: A two-week course designed for Search and Rescue Mission Co-coordinators.
- SAR Mobile Facilities/On Scene Co-coordinator Course: A three week course designed to prepare CCG Ship Officers and Canadian Forces aircraft crew to manage SAR operations and perform the duties of an on-scene coordinator.
- Search and Rescue Mission Coordinator

Course (SMC): A three-week course designed for Joint Rescue Coordination Center or Maritime Rescue Sub-Center personnel who are involved in Search and Rescue incidents.

- Small Vessel Command Course (SVCC): An eight week course designed to be a model of operations for a typical Coast Guard lifeboat station or small vessel station.

These courses vary in length from two weeks to eight weeks for the Small Vessel Command Course.

Cross Border SAR Prosecution

Normally requests for agency assistance across the border on the Great Lakes flow between the JRCC in Trenton, Ontario and the Ninth District Command Center in Cleveland, Ohio. However, communication can also occur with the MCTS in Sarnia, Ontario and the Sector offices in Detroit, MI and Sault Ste. Marie, MI.

The Canadian SAR system on the Great Lakes has the advantage of having C-130 Hercules aircraft available for SAR provided by Canadian Forces 424 Squadron based at Canadian Forces Base in Trenton, Ontario. The close proximity of the Canadian long range fixed wing assets at 424 Squadron sometimes makes them the asset of choice for major SAR efforts on the Lakes. A C-130 requested from Trenton can be on scene in a fraction of the time than a USCG aircraft dispatched from Elizabeth City, North Carolina. Canadian air assets for SAR on the northern Lakes of Upper Lake Huron and Lake Superior are somewhat thinner. For this reason, assistance for MEDEVAC or SAR in Canadian waters in the upper Great Lakes may be funneled to USCG Air Stations in Traverse City, MI or Detroit, MI due to their ability to respond in areas where Canadian authorities cannot. However, even though air assets are assisting with SAR cases in foreign airspace under an agency assist request, customs clearance must still be obtained by the host country when landing for a MEDEVAC transfer or any other reason.

SAR Cases requiring surface asset response in international waters in the Detroit, St Clair and St Lawrence River Systems may require somewhat more coordination. Cases occurring solely in Canadian waters are referred to the JRCC in Trenton, if U.S. assistance is requested, Canadian authorities retain SAR Mission Coordinator (SMC) authority and U.S. assets take their tasking from the JRCC through their Sector. The situation is reversed for cases occurring in U.S. waters. In many instances, U.S. or Canadian Search Response Units may respond based on which asset is closest to the scene.

Conclusion

Search and Rescue prosecution in the international border region presents its unique challenges and opportunities. The excellent relations between the U.S. and Canadian Coast Guards is a major factor in the success of search efforts in this area.

Acknowledgement

Thank you to Mr. Dan Coultis and Mr. Andy Maillet of the Canadian Coast Guard for their technical assistance with this article.

Singal Flare Disposal

To date, flares can not be recycled but special care should be taken with their disposal. Throwing flares in your household trash can cause



a dangerous situation and setting off old flares can result in false distress reports. To dispose of expired flares contact your local county public works department, police or fire department. Alternatively check with a local boating education group. They often use old flares for educational purposes.

How Do I File A "Float Plan"

Float Plans are not actually filed with the Coast Guard. The information should be left with a responsible party ashore. In the event of emergency, or if your vessel is overdue to it's destination, that party should contact their nearest Coast Guard unit with the information. A sample Float Plan can be obtained from: <http://www.uscg.mil/hq/g-o/g-opr/SARfactsInfo/float%20plan.htm>

Satellite Phones, Cell Phones & SAR

VHF-FM radios normally provide superior service in an emergency. When a MAYDAY is sent out via VHF-FM radio, not just one party is receiving the distress call; any nearby boaters can hear the distress call and offer immediate assistance. Satellite and cellular phones are point to point; other boaters in the area cannot hear the call and consequently will not be able to respond.

VHF-FM radios are manufactured today with Digital Selective Calling (DSC). This feature provides the mariner with an emergency feature that will send a distress alert with the vessel's information and Global Positioning System (GPS) location at the press of a button. It is important to note that the DSC radio must be properly registered with the Maritime Mobile Service Identification number through BoatU.S., and the radio must be properly interfaced with the GPS in order to send an accurate position.

In some instances, satellite or cellular phone may be the only option available to communicate a distress. A full list of emergency contact phone numbers can be found at: <http://www.uscg.mil/hq/g-o/g-opr/rcc's.htm>

With Flood Waters Rising The DARTs Hit Their Target

By Public Affairs Specialist Third Class, Thomas M. Blue

JEFFERSON CITY, Mo. – High, swift, debris-filled water is enough to drive most people to escape to higher ground but, there is a select group of men and women whose jobs depend on the unexpected curve balls thrown from Mother Nature.

These men and women comprise teams throughout the Coast Guard known simply as DARTs or Disaster Assistance Response Teams.

DARTs are specialized teams that are trained in evacuating citizens from flooded areas and relocating them out of harms way. Their missions are accomplished with 16-foot skiffs boats, equipped with small outboard motors.

When mobilized, DARTs can move quickly and easily with all the needed assets to be a fully capable, self-sufficient unit that can move into the affected areas to assist citizens and conduct close quarter search and rescue.

“We launch our boats and maintain radio communications with the team supervisor from a central location,” said Senior Chief Petty Officer Wilbee, DART leader from Coast Guard Sector Upper Mississippi River. “We also coordinate with state and local agencies to ensure that all citizens are safe and evacuated.”



DART members from Coast Guard Sector Upper Mississippi River observe the increasing flood stages with Jefferson City, Mo. police. U.S. Coast Guard photograph by PA3 Thomas M. Blue.

Intense rain induced flooding across the upper region of the Missouri and North Platte rivers sent rising water and debris raging down the lower half of the Missouri River in early May 2007.

Missouri state and local agencies began issuing evacuation orders and barricading roads in areas prone to flooding May 8, 2007.

This order prompted Coast Guard Capt. Sharon Richey, Commander of Coast Guard Sector Upper Mississippi River to mobilize the DARTs for support.



Petty Officer 3rd Class Clayton Harts, with the Disaster Area Response Team from Coast Guard Sector Upper Mississippi River, conducts checks on the 16-foot flood boats. U.S. Coast Guard photograph by PA3 Thomas M. Blue.

“Even if we didn’t launch, we wanted state and local agencies, especially the citizens of Missouri to know that if they needed us, the Coast Guard was there for them,” said Richey.

This mobilization of the DARTs, also moved the Coast Guard to established an Incident Command System (ICS) and an Incident Command Post in conjunction with the State Emergency Management Agency (SEMA), in Jefferson City to monitor the river situation.

The DARTs were sent to Jefferson City, Mo., the area of most concern, to stand-by and await the order to launch. While there, area familiarization was conducted and levees, dams and river conditions were monitored.

After several days of waiting the order to launch never came and the ICS along with SEMA was disbanded.

The DARTs were ready to do the job that they had done so effectively in September of 2005, after Hurricane Katrina in New Orleans-evacuate citizens and save lives.

“We were ready in Jefferson City or wherever we were needed,” said Petty Officer 1st Class Matt Cossitt, a DART crewmember and skiff operator.

With river stages falling, roads reopening and Missouri citizens returning to their homes the DARTs returned to Sector Upper Mississippi River in St. Louis to train and prepare for the next time Mother Nature unleashed her fury.

Coast Guard Petty Officer Third Class Thomas Blue is a Public Affairs Specialist assigned the to the Coast Guard's Eighth District.

It's No Joke! Hoax Distress Call Prevention Strategies

By Lt. Commander Benjamin Benson



When did the Coast Guard received its first hoax radio distress call? It could not have been too long before someone recognized the anonymity radio afforded and tried it out. Such calls are a plague to everyone who has had to deal with them. Here is some practical advice for mass media communication strategies aimed at stopping the hoax caller.

To persuasively communicate you need to know who you are speaking to and what motivates them. Unfortunately with hoax callers you don't have this information. The anonymity of the callers means you can, at best, only make educated assumptions about who they are and what motivates them.

Addressing the question of motivation is vexing. In mass communications you must consider ALL your audiences; you need to consider why some people make hoax calls and other people are not making these calls. For example, in the Coast Guard's First District something has been motivating people to make less hoax calls. Any communications strategy applied here needs to consider how to not alter this trend.

Fortunately there are some reasonable assumptions you can make. Taking some logical steps, you can craft a communications strategy targeted to mitigate a hoax caller problem without inadvertently motivating further calls. The approach recommended here is nearly intuitive. Its value lies in being clear about who your audience is and how you want to affect them. This clarity of target and intent maximizes the persuasiveness of your communications.

The Two Approaches

Communications, and specifically persuasion theory, suggests two approaches that should be used in concert in a hoax call prevention campaign. The first is the "law enforcement" focused approach of highlighting the potential consequences to a hoax caller who gets caught. The second is a "dangers and cost" focused approach highlighting the consequences to the public and agencies associated with hoax call responses.

These two approaches belong together. Talking about criminal penalties without noting the serious negative consequences of hoax calls may appear like a hollow bureaucratic threat. Talking about the problem of hoax calls without noting that it is a crime

leaves out vital information. To be most effective, in a given hoax caller scenario, one of the approaches should be emphasized over the other.

Who Are You Talking To?

Given the anonymity of the hoax caller, we are forced to make assumptions. Very broadly speaking, hoax callers fall into two categories, "serial callers" and "jokers". A challenge we face is that both types are not likely to be very responsive to our messages.

The serial callers know what they are doing and how to make the response agencies jump. These callers want to harass the response agencies, or derive satisfaction from creating a response. While this type of caller is likely to look for news coverage of the response and will hear our messages, they are taking deliberate actions they know

"If we oversell our ability to nab a caller, a serial caller might be emboldened by "we'll get you" claims."

to be illegal and will not be easy to dissuade. (While this category includes criminals that employ hoax calls to distract attention from other illegal activities, this analysis does not specifically address that subgroup.)

The jokers are the children, teenagers, drunks and fools that think it's funny or cool to get on channel 16 and yell: "Mayday! Mayday! Mayday! Help! We're sinking! Ha ha ha!" A person doing this is not firing on all pistons and you can reasonably assume that they are not paying close attention to our messages.

So if the people making the hoax calls are not likely to be attentive to our messaging, how can we reach them? Fortunately, there is an entire network of people who we can engage to help us. Our audiences include (1) people influential to the hoax caller, (2) people who know about the hoax caller who could help us apprehend them and (3) potential hoax callers we can dissuaded from ever making a call. As it will not be possible to speak to one and not the other, our messaging needs to be appropriate for the hoax caller and all other audiences simultaneously.

Keep in mind that the majority of your audience consists almost entirely of allies and potential allies. While it may be tempting to

threaten the aggravating hoax caller, you may alienate your allies while your hoax caller is not listening or is unimpressed.

Law Enforcement Focus For The Serial Hoax Caller

When dealing with a serial hoax caller emphasize the law enforcement aspect to seek the public's support in apprehending the criminal hoaxter. You need to communicate to the people who can help you (1) what is going on, (2) that it is a crime, and to motivate them, (3) use the danger / cost messaging to highlight why hoax calls are a problem.

The news media will likely be very helpful. The mystery and drama make for great news. Audio recordings of hoax calls may be played on TV and radio news, newspapers may also post audio clips on their web sites and the public may be inspired to sleuth out the sociopath among them.

Providing summaries of past prosecutions is another tool for the law enforcement approach. These remind your audiences of the gravity of the crime and of our seriousness in apprehending the perpetrator.

A danger area here is to oversell the threat of apprehension and create a cat and mouse game. While technologies are enabling us to better identify a caller, this remains a crime the perpetrator gets away with more often than not. You don't want to challenge someone who is getting a thrill out of it.

Danger And Cost Focus For The Joker

A joker hoax caller must think it is cool or funny to make these calls. Their belief that their peers admire such action provides our opportunity to persuade them to stop.

Cognitive dissonance is a powerful persuasion method. Don't be intimidated by the fancy name, it's rather intuitive and easy to craft highly effective messages.

This theory holds that people have various separate beliefs about themselves and the world. Some beliefs fit together and others conflict, or even oppose, each other. While conflicting ideas remain separate, we can't ignore them. For example a person might think of themselves as unbiased, yet have no qualms about making racist comments. If such opposed beliefs come together the conflict becomes apparent and the person feels mental discomfort such as confusion, shame or embarrassment. Facing the conflict and discomfort the person may be persuaded to abandon one of the opposing beliefs. In our example, if the person is confronted with the bias exposed in their racist comments they will feel mental discomfort and may be persuaded to give up to comments (or at least recognize they are not as unbiased as they believed).

The joker thinks of themselves as being funny and/or cool and wants their peers to see them this way. If the joker's peers see hoax calls as neither funny nor cool, the joker will soon be confronted with their view. With the conflicting views exposed, the hoaxter should experience cognitive dissonance (i.e. embarrassment, shame, or

discomfort) and will hopefully not make any more hoax calls.

This approach is also appropriate for potential callers. Convincing the public that hoax calls are neither funny nor cool may stop potential hoaxers from calling.

Additionally, you should highlight the dangers a hoax distress call creates for other mariners as well as the responders. There are some dramatic cases that illustrate the danger of hoax calls. The 1990 fishing vessel Sol E Mar sinking is an ideal example that is hard to overuse.

Highlighting the tremendous financial costs (your taxpayer's money) associated with such searches also shows the calls as uncool and unfunny. Note the wear on equipment and crews as a reduction in readiness; though avoid sounding like you're whining.

In taking this approach it is important to remember the people you are talking to are your allies. Emphasize the seriousness of hoax calling without lecturing or threatening while communicating that this is a crime. Don't treat your audience like they are the criminals or you will quickly lose their support. They are your allies.

The Dilemma Of Our Limits

Overestimation of how well we can track a hoax caller is a dilemma. Given the technological advances of recent years, the public is increasingly aware of high-tech tools for tracking calls. It is possible this knowledge has contributed to some decrease in calls.

While it is valuable to highlight the technologies that we have at our disposal, until we can routinely pinpoint a caller, we may be better off letting the public assume we can do more than we often can. If we oversell our ability to nab a caller, a serial caller might even be emboldened by "we'll get you" claims.

Summary

Hoax callers' anonymity is a dilemma for a mass media communications campaign targeted at stopping calls. Fortunately, using reasonable assumptions about the caller type, two approaches can be balanced to either seek the public's help in apprehending a serial caller, or develop peer pressure to prevent joker callers. The two messaging types are the law enforcement approach and the cost/dangers approach. Emphasize one type as your primary message and include the other. In all cases your audience is your ally, so avoid threatening messages.

Public overestimation of caller tracking technology may be working to reduce calls. Overstressing a "we'll get you" message could backfire and even encourage a hoaxter to call.

Lieutenant Commander Benson is the Public Affairs Officer in the Coast Guard's First District in Boston, MA.

Mass Rescue Operations: Closing the Gap

By Mario B. Teixeira, LTJG, USCG

Traditionally, the United States Coast Guard has been in the forefront in maritime search and rescue operations, normally being called upon by vessels varying in size and in distress, requesting immediate evacuation of a small group of people. In situations such as the one described, our assets and capabilities have allowed us to excel, completing missions in timely and stylish fashion. Removing and relocating a small number of people has rarely been an issue. Since the 1980s, the Coast Guard has occasionally faced rescue situations that have taxed immediate capabilities. In 1980, the M/V Prinsendam, a cruise ship with 520 passengers, experienced a disabling fire that required coordinated response effort 120 miles at sea in the Gulf of Alaska. The Coast Guard and Air Force deployed helicopters and were able to “pluck” passengers out of lifeboats one-by-one, and transfer them to the supertanker Williamsburgh. Although all passengers and crew of the Prinsendam were rescued, the rescue effort for 520 people took over 18 hours.

The need for mass rescue operations (MRO) has become increasingly evident on a worldwide scale. Events such as hurricane Katrina (2005), Loma Prieta Earthquake (1989), and the Missouri River Flooding (1993) are real-life testimonies that highlight the need to research, revisit, and possibly cultivate new policies, procedures, and technology supporting mass rescue operations. As defined by the International Maritime Organization (IMO), a mass rescue operation (MRO) is one that involves the need for immediate assistance to large numbers of people in distress such that capabilities normally available to search and rescue (SAR) authorities are inadequate. Whether the cause is a natural disaster, marine casualty, terrorist event, or human error leading to mishap on a large scale, the Coast Guard can expect to be called upon to provide MRO assistance in time-critical situations. With the Commandant’s vision of the Coast Guard’s role as “all threats, all hazards, always ready,” it is evident that we will have a leadership role in response efforts.

The Coast Guard Research & Development (R&D) Center in Groton, Connecticut, has monitored rescue events that have overwhelmed current Coast Guard capabilities, building a strong business case to promote the application of technology, implementation of policy, and/or the alteration of procedure in mass rescue operations. As stated, there is a high probability that, in the future, the Coast Guard may be called upon to respond to mass rescue situations in the maritime environment and possibly beyond. Because of this possibility, there exists a myriad of mass rescue situations for which the Coast Guard could possibly be called upon to respond. Some of these situations have a higher



probability of occurring than others. Attempting to prepare for any and every situation that the Coast Guard may encounter would be extremely costly and wouldn’t make much business sense. If the R&D Center were to spend the money and resources to design and build equipment that would rescue 100% of the people involved in a mass rescue situation that, realistically, may only occur once in every hundred years, the R&D Center would also surely have a lengthy explanation due to our sponsors and stakeholders (let alone the taxpayers!).

With this in mind, the R&D Center launched a thorough scoping study aimed towards identifying the mass rescue situations the Coast Guard will most likely encounter. The R&D Center agreed that the best way to identify the mass rescue scenarios that were most common in the Coast Guard, as well as the scenarios that we are most likely to face, would be to call upon a panel of highly-knowledgeable, experienced members of not only the operational SAR community, but also of the communities of Passenger Vessel Safety, Commercial Maritime Transportation, Airline Contingency Authority and State Emergency Management. The panel drew members from most every area of the country.

The Mass Rescue Operation Scoping Effort Workshop was held in Alexandria, Virginia, in September 2006. In general, the agenda called for a “scenario identification” session in the morning, and a “scenario risk-ranking” session in the afternoon (based on the morning’s discussion). Bringing in members from far reaches of the country proved to be very effective – there were scenarios brought up that many had never even considered. During the morning session, there was much discussion regarding what exactly constitutes a “mass rescue operation.” The International Maritime Organization (IMO) definition was used to identify and define a “mass rescue operation” for the workshop. However, the definition is vague. It

was noted that if a SAR case is considered a mass rescue operation based solely on the IMO definition, then there have been SAR cases that involved as little as 8 people which, because they overwhelmed the local response capability, would have been considered a mass rescue. Workshop members agreed that, because the local response capabilities were overwhelmed in situations such as those, they should be considered mass rescue.

During the morning session, the mass rescue scenarios identified are as follows:

- A1 – A large vessel sinks, and passengers and crew must be evacuated.
- A2 – An oil rig sinks, and the crew must be rescued.
- B1 – A major casualty occurs aboard a cruise ship that requires evacuation.
- B2 – A major casualty occurs aboard a domestic vessel (passenger ferry) that requires evacuation.
- C – An airplane crash requires passenger extraction and water rescue.
- D – A natural disaster occurs requiring air, land, and water rescue.
- E – The rescue and interdiction of a large number of refugees/illegal immigrants.
- F – A waterborne evacuation is caused by a large-scale terrorist action, industrial accident, natural disaster, or nuclear/biological incident.
- G – The rescue of people from a collapsed or burning waterfront building or facility.
- H – The rescue of individuals stranded on an ice flow or on a ship beset in ice.
- I – The rescue of individuals caused by a bridge collapse or a train derailment.

- J – The rescue of a large number of people from a flooded (or flooding) tunnel.
- K – Small mass rescue operation (as aforementioned).

Workshop participants agreed that the listed scenarios were the ones that would most likely be encountered by the Coast Guard. The original categories “A” and “B” were split up to “A1,” “A2,” “B1,” and “B2” so that they would be more specific (as opposed to having “casualty far from land” as one of the categories, as was the case originally for “A”). After a working lunch, the risk/ranking process of the workshop was initiated.

Risk management consultants provided by the RDC introduced the relative risk/ranking index method that would be used to rank the scenarios identified in the morning session. As explained during the workshop, risk is defined as the product of the frequency of an event, and the consequence of the same event. In a study such as this one, the status quo, or current Coast Guard capability, should also be taken into account. With this being considered, a “1-to-10” numbering system was devised for both risk, which is the frequency and consequence of an event, and current Coast Guard capability to respond to such an event. With regard to risk, lower numbers meant that the scenario being evaluated was either less likely to occur or the consequence was lower, or a combination of both, while higher numbers were the exact opposite. Figure 1 depicts the chart that was used to assign these numbers.

With regard to ranking current Coast Guard capability, a similar numbering system was devised, with higher numbers equating to a lower likelihood of performing an effective rescue, while the lower numbers equated to a higher likelihood of performing an effective rescue. The term “effective rescue” presented another challenge to workshop participants – was it reasonable to define an “effective rescue” as one where everyone is rescued? In smaller SAR cases (such as one involving only three or four people), it is very realistic to aim for rescuing all those involved, because in these situations, the number of people being rescued would not overwhelm the capabilities of the local Coast Guard assets. However, we are examining the rescue efforts of an overwhelming number of people. Many cruise liners nowadays have the capacity for thousands of passengers. Is it realistic to say that we would be able to rescue all those involved in a rescue operation? After much discussion, workshop participants agreed that using extra time to specifically define an “effective rescue” would not be worth the effort. Therefore, for the purposes of this workshop, the participant’s best judgment would be heavily relied upon in deciding what an “effective rescue” would be. With this being said, in order to quantify current Coast

Frequency		Consequence (Fatalities if not rescued)		
Time Between Events	Frequency Category	Low (50 - 150)	Medium (150 - 1500)	High (>1500)
Occurs more than once a year	High	7	10	10
Occurs once per year to once per 10 years	Medium	4	8	10
Occurs once per 10 years to once per 100 years	Low	2	5	9
Time between events is greater than 100 years	Very Low	1	3	6

Figure 1 - Risk Table

Rescue Index	Probability of Achieving an Effective Rescue
10	Less than 10%
9	10%-19%
8	20%-29%
7	30%-39%
6	40%-49%
5	50%-59%
4	60%-69%
3	70%-79%
2	80%-89%
1	>90%

Figure 2 – Rescue Likelihood Categorization

Guard capability to respond to any event being analyzed, Figure 2 was used.

Risk Index	10		D							
	9		D						A1	
	8		D	E, B1	E	B2	B2			
	7	K	K							
	6									
	5		F			C, G	G			
	4		A2, F	A2	A2		I	I		
	3		A2, F	A2	A2					
	2		A2, F	A2	A2					
	1		H	H						J
	1	2	3	4	5	6	7	8	9	10
	Rescue Likelihood									

Figure 3 – Visual Display of Risk Index & Rescue Likelihood

After a long afternoon session of assessing scenarios and quantifying likelihood, consequence, and current capability, workshop results were finally beginning to materialize. In order to further understand where each scenario was ranked in respect to the others, workshop participants were provided with a graphical display of results, as shown in Figure 3.

In general, risks located in the top right-hand corner of a table such as this one are the risks categorized as “unacceptable,” and these are the risks that would need to be terminated, transferred, or treated. The risks on the lower left-hand side of the table, however, are the risks considered “acceptable,” because they do not happen often, their consequence is not as great, or the Coast Guard already has a higher likelihood of rescue (or a combination of the three).

The results of the workshop show that the scenario the Coast Guard would most likely be called upon to respond, involving a magnitude of people that would overwhelm our current capabilities, is a large vessel sinking, where the passengers and crew need to be evacuated and rescued. Other scenarios of concern, based on the relative ranking tool used, were a domestic passenger vessel requiring evacuation, a natural disaster requiring air, land, and sea rescue, and a major casualty aboard a cruise ship, requiring the evacuation and rescue of the passengers and the crew.

The next step for the R&D Center with regards to MRO is to identify additional stakeholders and identify their needs and wants to find a solution to this problem. Conducting this analysis will ensure that not only are alternatives identified, but it will also ensure that when a solution is developed it will be “user friendly,” because user expectations would have already been identified. Therefore, with the assistance and input of service members throughout the Coast Guard, the R&D Center will continue its work to identify and develop a solution and in hopes of closing previous gaps which have been faced regarding mass rescue operations.

LTJG Mario Teixeira is the Project Manager for the Mass Rescue Operations study being conducted at the Research & Development Center in Groton, CT. Questions regarding this project may be directed to Mario.B.Teixeira@uscg.mil



Recent IMO Passenger Ship Safety Initiatives

Recognizing the risks associated with passenger vessels that are not only getting larger in size but are operating in areas increasingly remote from SAR facilities, the International Maritime Organization (IMO) has recently focused on a number of initiatives aimed at passenger ship safety. IMO convened a task group to assess whether current regulations are sufficient and whether the regulatory framework should place more emphasis on the prevention of a casualty from occurring in the first place; with an eye that future passenger ships should be designed for improved survivability so that, in the event of a casualty, persons can remain safely on board as the ship proceeds to safe harbor. Out of this effort, IMO’s Maritime Safety Committee adopted a number of important circulars.

A wealth of additional information on the IMO’s passenger ship safety initiatives can be found at: <http://www.imo.org>

Around the World with:

By Benjamin Strong

Amver Breaks Records in 2006

The Amver program broke numerous records in 2006. Over 5,000 vessels earned awards for participation, a 15 percent increase from the previous year. The Amver daily on plot average climbed to 3,185 vessels with the highest daily number of 3,376 ships available on October 22, 2006. 1,064 new vessels enrolled in the program in 2006. Most importantly, 213 ships from 31 countries rescued 333 lives.

Navy League Award to Amver Cruise Ship

The United States Navy League presented its annual Navy League Amver Award Medal to the Holland American Line Cruise Ship NOORDAM at its annual dinner on March 14, 2007.

On June 6, 2006 the crew of the Holland American Line Cruise Ship NOORDAM rescued 22 migrants from their capsized boat in the Aegean Sea. The body of a young boy was later pulled from the water. Crew onboard the NOORDAM came to the aid of the group after spotting a person floating in the water off the coast of the island of Samos. A rescue boat and two tenders were lowered and rescue operations lasted more than two hours.

The survivors, believed to be Somali, were wearing lifejackets and said they set sail from Kusadasi, Turkey. The NOORDAM was on a ten day round trip from Italy and had left Santorini when it came across the group.

The Navy League award, inaugurated in 1997, was established to recognize an exceptional rescue at sea, involving a U.S.-owned, crewed, or operated commercial ship participating in the Amver system. The award is presented only in those years where a rescue of appropriate significance takes place.



Left to right: Dinner Chairman John Kelly (COO, Xerox Global Services); New York Council Navy League President Dr. Daniel M. Thys; Master, C/S NOORDAM, Captain Hans Mateboer, Holland America Line. Photo courtesy: Navy League



Safety at Sea International Amver Award

Brighton, England was the scene for the Safety at Sea and Marine Equipment Exhibition (SASMEX) where the Safety at Sea International Amver Award was resurrected and awarded to the M/V ANTHEMIS.

The United States Coast Guard Atlantic Area Command Center received notification from RCC Halifax that the S/V ROCHELLE IV was beset by weather and taking on water approximately 630 nautical miles east of Chincoteague, Virginia.

Multiple reports of a distress call were relayed by various vessels in the area but the distress message was broken up and garbled. The USCG Atlantic Area Command Center initiated an Amver surface picture and identified the M/V ANTHEMIS as the closest vessel. The ANTHEMIS agreed to divert to the last known position of the ROCHELLE IV. In addition to the ANTHEMIS, RCC Halifax diverted the Canadian warship HMCS ATHABASKA and a Canadian C-130.

Through a third party, the rescue coordination centers were able to establish a better position for the beset sailboat and relay to the sailors that a commercial vessel and aircraft were en route to provide assistance. The ANTHEMIS arrived on scene and the master began formulating a plan that would safely embark the four people on board the stricken sailboat. The master and crew of the ANTHEMIS were able to pass immersion suits to the survivors for them to don during the rescue operations.

The initial plan was to have the survivors enter the water, swim to the ship and don a horseshoe harness. The master of the ANTHEMIS was concerned that if he got too close to the sailboat he would crush it in the heavy weather. Another attempt was made by the ANTHEMIS by lowering a small boat, but the seas and winds were too great to effectively rescue the sailors this way. Another attempt was considered by inflating a life raft and tying a sea painter to it bringing the raft alongside the M/V with the survivors aboard.

The ANTHEMIS was able to rescue one survivor but had to wait until the weather improved before the remainder of the survivors



M/V ANTHEMIS conducts rescue operations of the S/V ROCHELLE IV off the coast of Virginia. Photo credit: Samos Steamship Company

could be rescued. Despite battering winds and continued rough seas the three remaining survivors were taken aboard the ANTHEMIS. Once the survivors were aboard the ANTHEMIS the master sent a message to the rescue coordination services stating “All four persons on board. They are in good health and having tea and sandwiches. Next port of call is Philadelphia in about 2 days.”

Amver Rescues

M/V CAPE BILBAO Rescues 2

The Amver participating tanker CAPE BILBAO rescued two American sailors 1,300 miles south east of Bermuda after their 41 foot sailboat was damaged by a drifting container.

The sailors, Eugene Meleski, age 74, and his wife Patsy, age 68, were aboard their sailboat, the Stella di Mare, when a large container struck and sheared off its rudder. Mr. Meleski attempted to repair the rudder unsuccessfully and activated his 406 EPRIB notifying the United States Coast Guard.

The Coast Guard diverted the tanker CAPE BILBAO, which was 420 miles away, to rescue the stranded sailors. On January 10, 2007 the Marshall Island flagged tanker, under the command of Captain Valerij Bulankovs, successfully rescued Mr. and Mrs. Meleski. “There were no injuries, but two of my crew members had to assist Mrs. Meleski up the 22 foot ladder from the sailboat to our ship”, stated Captain Bulankovs.



Ms. Beverly Howard, left, and Mr. Benjamin Strong, far right, present Mr. Keith Mellor, Director of Alberta Shipbrokers with the green Amver pennant at the Safety at Sea International Awards in Brighton, England April 24, 2007. Mr. Mellor received the award on behalf of the Samos Steamship Company and the M/V ANTHEMIS. Photo credit: United States Coast Guard

The CAPE BILBAO continued on its voyage to Fos, France where the Meleski's were met by U.S. State Department officials who arranged for their return to the United States.

Mr. Meleski described the rescue and ten day passage to France as a treasured experience after the unfortunate termination of their sailing adventure aboard the Stella di Mare.

International Amver Rescue Operations Saves Three Sailors

On May 25, 2007, Rescue Coordination Center Bermuda notified the United States Coast Guard that an Amver participating merchant vessel, the MIGHTY SERVANT I, had located a 27 foot sailboat adrift approximately 350 miles south of Bermuda.

The MIGHTY SERVANT I, a 623 foot open deck heavy transport carrier, was battling 25 knot winds and 10 foot seas in an attempt to rescue the three people aboard the sailboat. After maneuvering the ship to provide a lee, the master of the MIGHTY SERVANT I ordered a small boat lowered. The three survivors were safely rescued.

The Italian sailors had set out from La Romana, Dominican Republic headed to the Azores when they suffered engine and rigging malfunctions. Fortunately the MIGHTY SERVANT I encountered the men. They had no EPRIB or electronic means to notify authorities of their distress.

According to the master of the MIGHTY SERVANT I the three men "... were in good health" and were most likely being transported aboard the merchant ship to its next port of call in Texas.



Mr. and Mrs. Meleski prepare for rescue by the M/T CAPT BILBAO. Photo courtesy of the crew of the M/T CAPE BILBAO



Amver, sponsored by the United States Coast Guard, is a unique, computer-based, and voluntary global ship reporting system used worldwide by search and rescue authorities to arrange for assistance to persons in distress at sea. With Amver, rescue coordinators can identify participating ships in the area of distress and divert the best-suited ship or ships to respond.

Amver's mission is to quickly provide search and rescue authorities, on demand, accurate information on the positions and characteristics of vessels near a reported distress.

For more information about Amver, please visit: www.amver.com

The Guardian: Fact or Fiction?

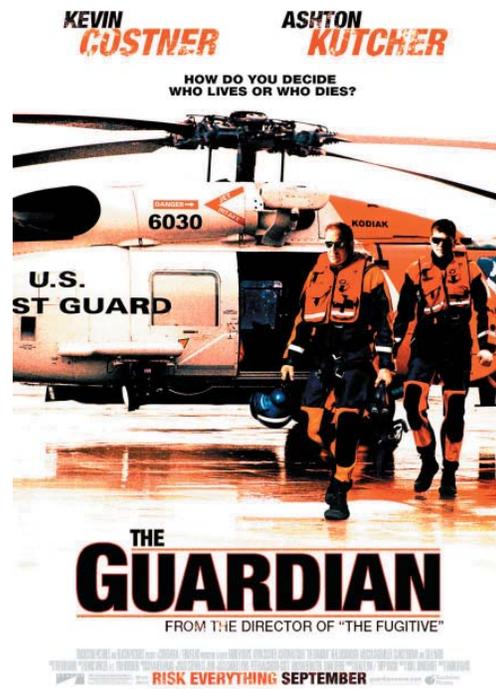
By Master Chief Aviation Survivalman Larry Farmer, USCG (Retired)
and Commander Hugh O'Doherty, USCG (Retired)

The recently released motion picture, “The Guardian,” directed by Andrew Davis, and starring Kevin Costner (Ben Randall) and Ashton Kutcher (Jake Fischer), is possibly the greatest search and rescue film ever made. It is essential viewing for those involved with SAR, and for the people in their lives.

“The Guardian” tells its story, with its cast, crew, and script dedicated to getting the details correct, its state-of-the-art special effects, its musical score that substitutes well for adrenalin, and a massive loan of hardware, hangar space, and pool time from the U. S. Coast Guard and U.S. Air Force. In the past, some fine movies (“Island in the Sky,” “Flight from Ashiya,” and “The Perfect Storm”) have attempted to capture the feel of actual rescue operations. Unlike those earlier movies, “The Guardian” deeply immerses the viewer into the lives of Search and Rescue (SAR) professionals and those who strive to join their trade. Using the framework of Coast Guard Aviation, and specifically, helicopter rescue swimmers, the screenwriter (Ron Brinkerhoff) has taken the nuts and bolts of SAR operations, elements of actual maritime rescues and mishaps, and sewn them together to support his fictional story about a rescue specialist at the end of his career, passing his experience and baton to a capable, but initially unfocused, rookie.

Make no mistake! This is not a “docudrama” nor a training film. This is an action movie. There are obligatory “soap opera” subplots, scenes of interservice rivalry, and a contrived myth in the script. Yet, through 5 rescue sequences and the middle portion of the film where eager volunteers attempt to become rescue swimmers, the story rises well above its predecessors by providing the viewer more than just glimpses of:

- The value of crew coordination.
- The importance of confidence and endurance to a swimmer, when he or she is alone, in the open sea, or in the surf.
- The challenges of hovering over water at night, hoisting personnel and/or rescue equipment to and from rolling vessels that bristle with obstructions, and handling multiple drowning people.
- The hard decisions facing crews, including whether or not to deploy one of their crew to the hazards of a debris-covered, cold, ocean; to what may be “bodies” or “fathers and sons.”
- The dangers involving entering a sinking or submerged object.
- The effects of hypothermia on the patient AND the rescuer.
- The importance of continuing CPR.
- The reality and toll of traumatic stress and survivor’s guilt.



- The inevitability of the need to retire from your life’s vocation.

That’s a lot of SAR biz in a 2 hour and 15 minute movie!

Ron Brinkerhoff (screenwriter), Davis, and the actors dunked themselves into the Coast Guard and rescue “culture.” The director hired Coasties as technical advisors, “boot camp” instructors, and actors. With this effort, we expected a good representation of the Coast Guard and the SAR mission. We received a lot more than we anticipated!

Costner and Kutcher and their respective characters are believable as the older quiet professional and the cocky, know-it-all, newbie. Characters like these do exist in real life! We’ve all worked with people like these, and these two actors have nailed them.

The film is 90% accurate. That’s a lot for any movie! However, some elements of the 10% can drive a detail-oriented insider crazy: night free fall deployments into water laced with debris, hoisting to a fishing vessel without using a trail line, igniting pyrotechnics in enclosed spaces, placing a patient with a broken leg into a basket instead of a litter, the Commanding Officer of the “A” School allowing “free lance training” of students, such as the extremes performed by Ben Randall, etc. We suspect that these and other minor flaws were allowed, to support the dramatic arc of the plot and simplify the filming. Despite these flaws, the remaining 90%, allows us to forgive all and enjoy the movie!

Some film critics have slammed "The Guardian" because of its similarities to "An Officer and a Gentleman" and "Top Gun." They also seem to believe that there is no way U. S. Coast Guard crews could make rescues in these conditions, thus writing the movie off as "Hollywood make believe." These critics are both short sighted and misinformed. In this instance, they don't seem to remember that some human experiences (rescue swimmer training) often parallel other human experiences (officer and fighter pilot training). Yet, they don't turn around and hammer the latest cinematic love story as a clone of "Romeo and Juliet!"

Some people will skip this film because of reviews they read or because they don't like Costner and/or Kutcher. That would be a mistake. For SAR people and those close to SAR people it would be a very unfortunate mistake.

Of course, this film was ultimately intended for the mass movie going (and/or renting) public. However, in their respect for this honorable profession and their diligence with the details, Davis, Brinkerhoff, cast, and crew have also given to those of us who participate or have participated in the SAR business, a gift. A tribute. As the film begins, we see and hear all these familiar images and sounds. The equipment, the spray, the noise, the gray swells of the sea, streaked with white. We can taste the salt. Our brain says, "OK, I've been here!" But, then instantly, our brain goes, "Oh! I get it! Now everyone will know what this looks, sounds, and feels like!" Our families and friends have an idea of the work we and our colleagues do or have done. This film vividly fills in a lot of blanks. It is the closest we'll ever see of what maritime rescue work is like, on the big screen. It is a wonderful vehicle for the people in our lives to more fully understand rescue. For this gift, we thank Andrew Davis, Ron Brinkerhoff, cast, and crew!

Editor's Note: In the 21 year history of the program, no Coast Guard helicopter rescue swimmer has ever died while deployed from his or her helicopter.

Larry Farmer was a career Aviation Survivalman (ASM). He flew as a C-130 dropmaster and loadmaster and a helicopter flight mechanic, from units on the Pacific, Gulf, and Atlantic coasts. After tours of running the ASM "A" School and subject matter specialist desk at the Coast Guard Institute, Larry was assigned in 1985 to be part of the team that put together the helicopter rescue swimmer program. At age 36, Larry graduated from the USN Rescue Swimmer School. For the next six years, he ran the standardization team, guiding units into integrating the use of rescue swimmers into their helicopter operations, and returning to these units to audit and evaluate their operations and continuing training. Larry now works in the rescue and survival equipment industry.

Hugh O'Doherty was a career Coast Guard Aviator. In addition to flying C-130s and 3 types of helicopters, Hugh served 3 years, flying on exchange with a Canadian Forces rescue squadron, on Prince Edward Island. He returned to the CG, in 1984. Because of his experience working with and deploying Canadian pararescue personnel, Hugh was also assigned to the team forming the helicopter rescue swimmer program. Hugh was the Chief, Aviation Life Support Section from 1987 to 1990, supervising the implementation of the swimmer program at more than half of the Coast Guard's helicopter units. Hugh now works in corporate aviation.



The "Real" Aviation Survival Technicians

Aviation Survival Technicians perform ground handling and servicing of aircraft and conduct routine aircraft inspections and aviation administrative duties. ASTs inspect, service, maintain, troubleshoot, and repair cargo aerial delivery systems, drag parachute systems, aircraft oxygen systems, helicopter flotation systems, dewatering pumps, survival equipment for air-sea rescue kits and special purpose protective clothing. ASTs also store aviation ordnance and pyrotechnic devices.

Aviation Survival Technicians function operationally as Helicopter Rescue Swimmers and Emergency Medical Technicians (EMT) Basic. ASTs may find themselves being deployed into a myriad of challenging rescues ranging from hurricanes and cliff rescues, to emergency medical evacuations from ships at sea. Other aircrew positions include HC-130H Dropmaster, Loadmaster, Sensor Systems Operator. HU-25A Dropmaster, Sensor Systems Operator, and Basic Aircrewman.

Training

The Aviation Survival Technician Training Program is a very intense and demanding program. This program begins with the Airman Program. The Airman Program is a four month training program at an operational air station. The trainee, designated as an Airman, has a course and training syllabus to complete and must receive the unit Commanding Officer's recommendation to proceed to the AST A-School. There is also a physically demanding training program with a requirement to pass a minimum fitness test. AST A-School is located at Aviation Technical Training Center (ATTC) Elizabeth City, N.C. The course is four months long followed by three weeks of EMT training at Training Center Petaluma, CA.

Qualifications

Candidates for AST must be in superior physical shape with no chronic orthopedic problems such as trick knees, back problems, or shoulder problems. Training is extremely stressful and is designed to identify those candidates who possess the physical and mental skills to handle the rigors of being an operational Helicopter Rescue Swimmer. Members of the AST Rating must be able to obtain and hold a Secret Security Clearance.

To find out more about U.S. Coast Guard Rescue Swimmers, visit our web site at <http://www.gocoastguard.com/Rates/ASTrate.htm> or talk to a Coast Guard Recruiting Office, 1-877-NOW-USCG (1-877-669-8724).



Rescue 21 In Full Rate Production & Ready For Deployment

By Kathryn Manzi

The Rescue 21 project has entered into Full Rate Production, which means the system is ready for full deployment. The first six locations to receive the Rescue 21 system, Sector Field Office (SFO) Atlantic City, SFO Eastern Shore, Sector Command Center (SCC) Mobile, SCC St. Petersburg, SCC Seattle and Group/Air Station Port Angeles have completed the regional performance testing and been accepted by the Coast Guard.

The next regions to begin the transition to the Rescue 21 communications system are SCC Long Island Sound, SCC Delaware Bay, SCC New York, and SCC Jacksonville. With environmental studies, tower leases and tower construction well underway these regions are scheduled to be online by the end of 2007.

When hurricane Katrina ravaged the Gulf Coast in August of 2005, one VHF-FM tower was completely lost. Rather than having the tower rebuilt to the previous specification, the Rescue 21 project opted to install the Rescue 21 communications system for SCC New Orleans in two parts. As of January 2007 SCC New Orleans is operational with one Rescue 21 tower and associated communications suite. The second phase will begin in January 2008 to replace the entire communications system with Rescue 21 equipment. Additional regions scheduled to receive Rescue 21 in 2008 and currently underway with acquiring tower leases and/or construction are SCC Key West, SCC Miami, SCC Portland, OR, SCC Astoria, SCC North Bend, SCC Corpus Christi, SCC Baltimore, SCC Galveston, and SCC Hampton Roads.

The Rescue 21 system has proven itself to be invaluable, as demonstrated in the SCC St. Petersburg case where a distressed vessel relayed a “way point” off their GPS rather than the “actual” current position. This error was not realized until the Coast Guard asset arrived on scene at the reported position and the distressed vessel was not there. The Sector watchstanders researched the Rescue 21 database for lines of bearing (LOB) correlated with the distress call and found that the LOBs crossed in a position nearly 15 nautical miles away. That position was passed in a UMIB and while the search asset was en route to the new position a Good Samaritan located the distress vessel. In this case, this was not a trivial task. With a higher volume of VHF-FM traffic as in St. Petersburg, correlating the voice transmission with the LOB's can be time consuming. The results and aid to searchers, however, are outstanding.

As with any computer based system, security and software patches and general updates to the system are necessary; Rescue 21 is no exception. Each time a patch or update is implemented this requires downtime to the system that, for the most part, the contractor has been able to minimize “off air time” to between 1 – 20 minutes. To

minimize the loss of communications to a region, patches are only implemented once given the go ahead from the SAR watchstander (no ongoing cases) and typically installed at night.

The operators at the test sites have done an outstanding job of identifying potential and actual operating issues. The solutions have made the operation of the system less cumbersome and more user friendly, greatly reducing simple human errors.

Some problems identified along the way with Rescue 21 that have already been corrected are: loss of audio to the speaker, where the call was not heard in the communications center but was recorded in playback manager; the opposite of that, where audio was heard over the speaker but was not recorded in playback manager; and the display of lines of bearing without audio.

Build three of the computer software enhancement addressed the majority of the Human System Interface (HSI) issues to the system and updated, corrected, streamlined or added capability to those areas, issues or problems identified through on-site testing and actual use of the system. As a result, the following are some of the enhancements that were made to the system:

- Elimination of lines of bearing that are not associated with audio transmission.
- Display of colored LOB's that differentiate secondary LOB's from the primary LOB's.
- Addition of new phone features such as displaying the 5 most recently dialed numbers, providing a core directory and speed dial.
- Allow editing in replay mode of caller position items without affecting historical data.
- Update to the latest version of ArcMap in the Geo Display.

The project personnel have worked tirelessly to bring a new communications system that assists SAR watchstanders in doing their job but does not overload them with all the new capability. In order to assure that the command centers are appropriately staffed, the project Sponsor has initiated a workload case study to see if the demands of the system outweigh the abilities of the communications watchstander. The results of the study should be available sometime this summer.

The majority of the issues that accompany the fielding of any new computer based system have been identified and are in the process of being or have been corrected. The test sites are doing their job in identifying the issues so as the remaining regions receive the system it will operate to its full potential.

SAROPS Proves Its Effectiveness

Search Planning Computer Program Helps Meet Unique Challenges

By Lt. Brian J. Murphy, U.S. Coast Guard

Two men from the tiny island nation of Palau were on the return leg of an inter-island boat voyage May 26, 2007, when they realized they would not have enough fuel to complete the trip. When they decided to make a fuel stop, their 20-foot boat, a twin-engine 60 horsepower loaner from a Palau-based tug company, was blown off course by strong winds, and the two islanders quickly lost their bearings. The search and rescue (SAR) liaison officer with Palau's Division of Marine Law Enforcement called U.S. Coast Guard Rescue Sub-Center (RSC) Guam to report the mariners overdue and request assistance.

This case became one of the first opportunities for RSC Guam to employ the new Search and Rescue Optimal Planning System (SAROPS), a sophisticated new search planning and drift modeling system that replaced two older programs the U.S. Coast Guard had previously used to find distressed mariners – the Joint Automated Work Station, or JAWS, and the Computer Aided Search Planning, or CASP system.

The U.S. Coast Guard's Fourteenth District has always faced unique challenges because of its huge size covering most of the Western and Central Pacific. Part of the Caroline Islands group in the Western Pacific, Palau is located 500 nautical miles to the east of the Philippines, in the far western corner the Fourteenth District's area of responsibility (AOR). The nation consists of more than 340 islands (mostly uninhabited) and was part of a former trust territory of the United Nations administered by the United States.

An independent nation since 1994, Palau's nearly 20,000 citizens rely heavily upon U.S. financial assistance and SAR resources thousands of miles away in Guam and Hawaii. While much of Palau's economy is based on tourism and the sale of fishing licenses to foreign fishing fleets, many citizens live on subsistence agriculture and fishing. Transportation by inexpensive and small-powered boats between islands is common and problematic for the Coast Guard. Capt. Chris Conklin, former Chief of the Fourteenth District's Response Division, has addressed the issue in several case studies.

"Generally, small powered skiffs are used for inter-island movements of short duration and typically end up in the open ocean after an engine failure," said Conklin, who now heads the Fourteenth District's planning division. "A lack of boating safety awareness and commitment by the local population is a causative factor."

Nearly one third of these overdue cases result in suspension of search efforts. From 2003 to 2006, there were 15 such cases involving 69 missing boaters, averaging 52 hours of search efforts; 47 people were recovered, 22 presumed lost. Often search efforts are hampered by lengthy delays in notification after vessels are overdue.



"Overdue and adrift boats such as these represent a chronic SAR problem for Guam and District 14, and require a significant amount of Coast Guard and DOD air resources," says Conklin. "There are usually lengthy delays in notification to the Coast Guard after the vessel becomes overdue."

This point, combined with a more than 24-hour transit through four time zones for a rescue aircraft from Barbers Point in Honolulu to the search area, or 12 hours for a Department of Defense asset from Kadena Air Base in Japan, generally results in excessively large search areas. Staging areas are often hundreds of miles from the search area, shortening time on-scene and fatiguing aircrews. Furthermore, the resilience of islanders must never be underestimated. Most are very experienced watermen who are known to sustain themselves on sea life, conserve fuel, jerry-rig sails, and flip their vessels to protect themselves in bad weather. These factors, combined with warm water temperatures, often create an evasive target and extended search efforts.

The two men during May's case, one from Palau, the other a Philippine national, departed Koror State intending to travel to Kayangel State, a voyage of more than 25 miles through an

archipelago of tall, rocky islands and barrier reef. When low on gas, they aimed for Ngarchelong, a village at the northernmost tip of Babelthau Island (the largest of Palau), approximately 20 miles into their journey. Sudden rain squalls with strong winds are common in this tropical climate; it's possible these two encountered just such a situation, causing them to quickly find themselves disoriented and without sight of land.

The request for U.S. Coast Guard SAR resources was routed to RSC Guam from the Government of Palau through the U.S. State Department's Embassy in Palau. RSC Guam assumed SMC – search and rescue mission coordinator – and began search planning using SAROPS. RSC Guam also notified the Fourteenth District's Joint Rescue Coordination Center in Honolulu, which tapped Barbers Point Air Station to launch a ready C-130 and rescue crew. Coast Guard C-130 Rescue 1714 was directed to stage out of Kwajelein – an atoll more than 2,900 nautical miles southwest of Honolulu and the largest island of the Republic of the Marshall Islands and a U.S. base of military operations since 1944.

The opportunity for search planners to apply SAROPS in this remote region came with some eager anticipation. There are several unknowns associated with remote Pacific regions such as Palau, including actual environmental conditions and a lack of area familiarity. There are no leeway tables that account for a wooden skiff typical of this AOR, and search areas are often skewed by highly variable local currents. RSC Guam's SAROPS drift model covered more than 4,000 square miles, and data relied almost exclusively on environmental data computer servers linked to SAROPS.

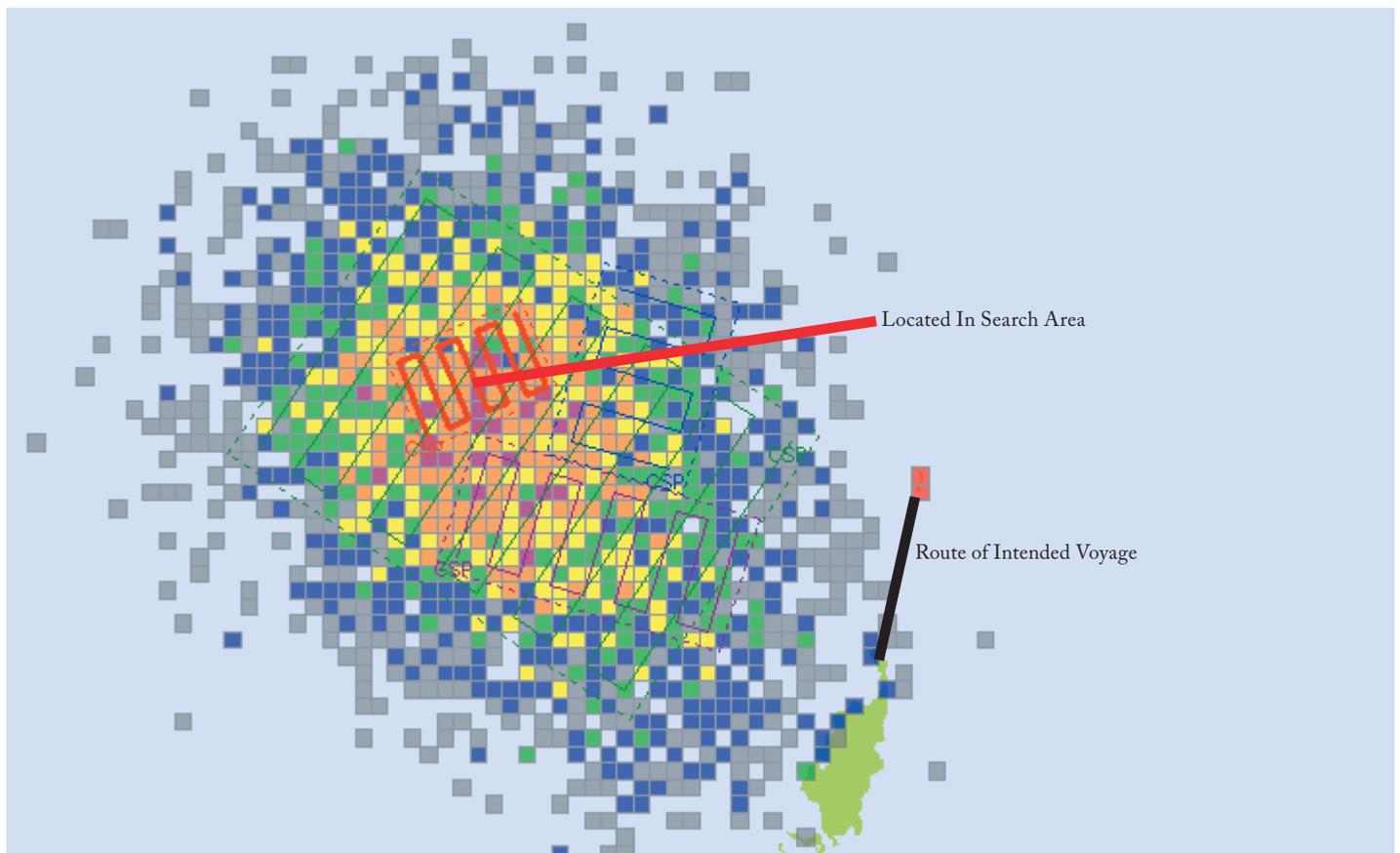
Before Rescue 1714's arrival, RSC Guam provided search tasking to a Good Samaritan single-engine aircraft based out of Palau, which was unable to locate the vessel. The PSS REMELIK, based in Palau as part of Australia's Pacific Patrol Boat Program to conduct maritime surveillance in the South Pacific, conducted a 10-hour search using SAROPS data and covered more than 400 square miles. Not long after Rescue 1714 had completed a three-hour search sortie, a tug (belonging to the same company as the missing boat) conducted a search in the Coast Guard assigned search area and located the two men in the heart of the SAROPS drift models.

The survivors were in good condition.

Subsequent analysis of completed searches showed that it's likely that by the time they were discovered, SAR resources had been within two miles of the vessel's position not less than four times during previous searches.

Operations Specialist First Class Zachary Graham was on duty for the U.S. Coast Guard in RSC Guam's command center during the case: "This was a good test for the SAROPS program," Graham said. "Adjusting to a new drift model system requires training and practice but SAROPS is proving to be an effective tool. SAR planners should be confident in its use on future cases."

Lt. Brian J. Murphy is a search and rescue controller in the U.S. Coast Guard's Fourteenth District Joint Rescue Coordination Center in Honolulu, Hawaii.



Actual SAROPS drift model with the search areas overlaid on the orange and yellow high probability search areas.



Coast Guard Announces More Than 1 Million Lives Saved

The U.S. Coast Guard announced during a ceremony August 4th, 2007 in Grand Haven, Mich., that it has rescued more than one million persons since it was established in 1790.

“When things are at their worst, America’s Coast Guard is at its best,” said Homeland Security Secretary Michael Chertoff. “What began as a revenue enforcement agency with a fleet of ten cutters established by Alexander Hamilton more than 200 years ago has evolved into the world’s premiere multi-mission, maritime and military service. It’s fitting that we celebrate the Coast Guard’s 217th birthday this August 4th as we recognize its brave men and women for saving more than 1 million lives over the course of its long and storied history.”

“As America’s lifesavers and guardians of the seas, Coast Guard men and women commit themselves every day to serving our nation and its people with selfless courage and unflinching determination,” said Adm. Thad Allen, commandant of the Coast Guard. “This year we celebrate a remarkable milestone in our history as more than one million lives have been saved by the Coast Guard since 1790. What began as America’s only lifesaving service charged with the dangerous duty of saving sailors from shipwrecks along our coasts has evolved into a modern-day, multi-mission Coast Guard that demonstrates the same commitment to saving lives that it did more than 200 years ago.”

The Coast Guard is one of America’s five armed forces and traces its founding to August 4th, 1790, when the first Congress authorized the construction of ten vessels to enforce tariff and trade laws, prevent smuggling, and protect the collection of the federal revenue. Responsibilities added over the years included humanitarian duties such as aiding mariners in distress and the service received its present name in 1915 when the Revenue Cutter Service merged with the US Life-Saving Service to form a single maritime service dedicated to saving life at sea and enforcing the nation’s maritime laws.

“The saying ‘A life lived for others is a life worth while’ truly summarizes being a member of the Coast Guard,” said Capt. Jim McPherson, a Coast Guard spokesman. “For 217 years our brave members rowed through the surf to save lives or flew through storms to make daring rescues. Although the technology has advanced, the common theme through the years is the heroism of Coast Guard women and men.”

The number of lives saved was calculated by the Coast Guard historian’s office through research of logs and records from the Coast Guard, the Revenue Cutter Service, the US Life-Saving Service, the Lighthouse Service and other agencies that eventually became the modern Coast Guard. In addition to tallying the total number of lives saved, the historian’s office has compiled a list of the top ten rescues in the Coast Guard’s history (see the Top Ten on page 38). The list shows the breadth of the Coast Guard’s efforts to save lives in peril on the seas for over 217 years.

“While this top-ten list is subjective, it certainly conveys the heroism of our people conducting this vital mission,” said Rear Adm. Mary Landry, director of governmental and public affairs.

The director of governmental and public affairs office has posted a compilation of Coast Guard rescue videos at:
<http://www.youtube.com/watch?v=LfkHTcqOZOU>

TOP TEN COAST GUARD RESCUES

The Coast Guard historian's office researched the logs and records from the Coast Guard, the Revenue Cutter Service, the US Life-Saving Service, the Lighthouse Service and other agencies that eventually became the modern Coast Guard to compile a list of the top ten rescues in the Coast Guard's history. The list shows the breadth of the Coast Guard's efforts to save lives in peril on the seas for over 217 years.

"While this top-ten list is subjective, it certainly conveys the heroism of our people conducting this vital mission".
--Rear Adm. Mary Landry, director of governmental and public affairs.

#10

1937 Mississippi River Flood: During the disastrous 1937 Mississippi River flood, the Coast Guard rescued a total of 43,853 persons who they "removed from perilous positions to places of safety". Additionally, they saved 11,313 head of livestock and furnished transportation for 72 persons in need of hospitalization. In all 674 Coast Guardsmen and 128 Coast Guard vessels and boats served in the relief operations. The immense scope of the operations actually eclipsed the number of persons that the Coast Guard rescued during the Hurricane Katrina operations.

#9

Bermuda Sky Queen Rescue (14 October 1947): The American-owned flying boat *Bermuda Sky Queen*, carrying sixty-nine passengers was flying from Foynes, Ireland to Gander, Newfoundland. Gale force winds had slowed her progress and she was running low on fuel. Too far from Newfoundland and unable to make it back to Ireland, the captain decided to fly toward the cutter *Bibb* which was on Ocean Station Charlie in the North Atlantic. The plane's captain decided to ditch and have his passengers and crew picked up by *Bibb*. In 30-foot seas, the transfer was both difficult and dangerous. Initially the *Bibb's* captain tried to pass a line to the plane which taxied to the lee side of the cutter. A collision with the cutter ended this attempt to save the passengers. With worsening weather, a fifteen man rubber raft and a small boat were deployed from the ship. The raft was guided to the escape door of the aircraft. Passengers jumped into the raft which was then pulled to the boat. After rescuing 47 of the crew, worsening conditions and the approach of darkness forced the rescue's suspension. By dawn, improved weather allowed the rescue to resume and the remaining passengers and crew were transferred to the *Bibb*. The rescue made headlines throughout the country and upon their arrival in Boston, *Bibb* and her crew received a hero's welcome for having saved all those aboard the ditched *Bermuda Sky Queen*.

#8

Overland Rescue: In 1897, eight whaling ships were trapped in the Arctic ice near Point Barrow, Alaska. Concerned that the 265 crewmen would starve during the winter, the whaling companies appealed to President William McKinley to send a relief expedition. USRC *Bear* sailed northward from Port Townsend, Washington in late November 1897. With no chance of the cutter pushing through the ice to Point Barrow, it was decided to put a party ashore and have them drive reindeer to Point Barrow. Lieutenant David H. Jarvis was placed in charge. He was joined by fellow officers Lieutenant Ellsworth P. Bertholf and Surgeon Samuel J. Call along with three other men. Using sleds pulled by dogs and reindeer, snowshoes, and skis, the men began the expedition on 16 December. They arrived at Point Barrow, 1,500 miles later, on 29 March 1898. The expedition managed to bring 382 reindeer to the whalers, having lost only 66. For their work, Bertholf, Call, and Jarvis received a gold medal from the United States Congress.

#7

Keeper George N. Gray and the Charlotte (NY) Life Saving Station (14-15 December 1902): The crew received the Gold Lifesaving Medal in recognition of their rescue of 4 men and 1 woman from the wreck of the schooner *John R. Noyes*. They were engaged for more than a day and a night with little sleep, having been under oars from 11:30 PM of the 14th to 4:30 PM of the 15th with the exception of about two hours. They pulled in a heavy seaway for nearly 60 miles and all were covered in ice and were frostbitten. In addition to the conditions and distances rowed, the keeper commandeered a train and sleds to move the beach cart and equipment through the deep snow drifts for the launching of the surfboat.

#6

The Priscilla Rescue: On 18 August 1899, Surfman Rasmus S. Midgett, from the Gull Shoal Life-Saving Station (NC), was conducting a beach patrol on horseback and came upon the barkentine, *Priscilla*, which had run aground. Given his distance from the station, he determined to do what he could alone. Immediately, he ran as close to the wreck as he could and shouted instructions for the men to jump overboard one at a time as the waves receded. Obeying his instructions, the sailors leapt overboard. Midgett, seized each man and dragged him from the pursuing waves safely to the beach. In this manner, he rescued seven men. There were still three men on board who were too weak to get off the vessel. Midgett went into the water and carried each of them to the beach. For the ten lives he saved, Midgett was subsequently awarded a Gold Lifesaving Medal.

#5

Joshua James and the Hull (MA) Life Saving Station (25-26 November 1888): Over the two day period Keeper Joshua James and his crew by their zealous and unswerving work rescued some twenty-eight people from five different vessels during a great storm. In addition to the number of individuals rescued, the number of vessels involved, the weather conditions, and the duration of their efforts, James and his crew conducted differing types of rescues which included the employment of the beach apparatus and rescue by boat. For their versatility, endurance, skill, and dedication, James and his crew were awarded the Gold Lifesaving Medal.

#4

Dorchester Rescue: On 3 February 1943 the torpedoing of the transport *Dorchester* off the coast of Greenland saw cutters *Comanche* and *Escanaba* respond. The frigid water gave the survivors only minutes to live in the cold North Atlantic. With this in mind, the crew of *Escanaba* used a new rescue technique when pulling survivors from the water. This “retriever” technique used swimmers clad in wet suits to swim to victims in the water and secure a line to them so they could be hauled onto the ship. *Escanaba* saved 133 men (one died later) and *Comanche* saved 97.

#3

Pendleton Rescue: On 18 February 1952 during a severe “nor’easter” off the New England coast, the T-2 tankers SS *Fort Mercer* and SS *Pendleton* broke in half. BM1 Bernard C. Webber, coxswain of motor lifeboat CG-36500, from Station Chatham, Massachusetts, and his crew of three rescued the crew of the stricken tanker *Pendleton*, which had broken in half. Webber maneuvered the 36-footer under the *Pendleton’s* stern with expert skill as the tanker’s crew, trapped in the stern section, abandoned the remains of their ship on a Jacob’s ladder. One by one, the men jumped into the water and then were pulled into the lifeboat. Webber and his crew saved 33 of the 34 *Pendleton* crewmen. Webber and entire crew were awarded the Gold Lifesaving Medal for their heroic actions. In all, U. S. Coast Guard vessels, aircraft, and lifeboat stations, working under severe winter conditions, rescued and removed 62 persons from the foundering ships or from the water with a loss of only five lives. Five Coast Guardsmen earned the Gold Lifesaving Medal, four earned the Silver Lifesaving Medal, and 15 earned the Coast Guard Commendation Medal.

#2

Prinsendam Rescue: A fire broke out on the Dutch cruise vessel *Prinsendam* off Ketchikan, Alaska on 4 October 1980. The *Prinsendam* was 130 miles from the nearest airstrip. The cruise ship’s captain ordered the ship abandoned and the passengers, many elderly, left the ship in the lifeboats. Coast Guard and Canadian helicopters and the cutters *Boutwell*, *Mellon*, and *Woodrush* responded in concert with other vessels in the area. The passenger vessel later capsized and sank. The rescue is particularly important because of the distance traveled by the rescuers, the coordination of independent organizations and the fact that all 520 passengers and crew were rescued without loss of life or serious injury.

#1

Hurricane Katrina: Search and rescue operations alone saved 24,135 lives from imminent danger, usually off the roofs of the victims’ homes as flood waters lapped at their feet. Coast Guardsmen “evacuated to safety” 9,409 patients from local hospitals. In total, 33,545 souls were saved. Seventy-six Coast Guard and Coast Guard Auxiliary aircraft took part in the rescues. They flew 1,817 sorties with a total flight time of 4,291.3 hours in the air. The air crews saved 12,535. A total of 42 cutters and 131 small boats also participated, with their crews rescuing 21,200. Over 5,000 Coast Guardsmen served in Katrina operations.

HONORABLE MENTIONS

• **Chicamacomico (NC) Lifeboat Station (16 August 1918):** On 16 August 1918 the British steamship SS *Mirlo*, proceeding northward along the Atlantic coast, struck a mine laid by U-117 about 1 mile off the Wimble Shoal buoy, abreast of the Chicamacomico Coast Guard Station. Her cargo of gasoline and refined oil spread over the sea and ignited. This converted the surface into a mass of flame and smoke. The matter of rescuing the crew was rendered extremely difficult owing to the heavy sea, quantities of wreckage everywhere, and the intense heat from the burning vessel and fuel. Despite these difficulties, Boatswain (L) John A. Midgett and the Chicamacomico Station crewmen forced their boat into this mass of fire and wreckage. After heroic efforts they rescued six men found clinging to a capsized boat. Midgett and his men then picked up two more boatloads (36 men) of the *Mirlo’s* crew and landed them through the heavy surf. The total count of those rescued was 42 persons. For their efforts, Midgett and his crew were each awarded the Gold Lifesaving Medal.

• **Carl von Paulsen Rescue:** LCDR Carl von Paulsen set the seaplane *Arcturus* in a heavy sea in January 1933 off Cape Canaveral and rescued a boy adrift in a skiff. The aircraft sustained so much damage during the open water landing that it could not take off. Ultimately, *Arcturus* washed onto the beach and all including the boy were saved. He was awarded the Gold Lifesaving Medal for this rescue. The rescue made him famous and he appeared in the “Unsung Heroes” comic book in the mid-1930s.

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Search and Rescue Publications Available on the Internet

SAR Watch - Office of Search and Rescue Newsletter (quarterly)

SAR Watch is a monthly newsletter designed to provide accurate, up-to-date highlights about important SAR program initiatives, along with other news and announcements of interest to our community of SAR professionals. From time to time, the newsletter will also include practical material for use by field SAR personnel. The SAR Watch compliments On Scene by providing a means to pass time sensitive information in a less formal format. SAR Watch is accessible via the SAR home page www.uscg.mil/hq/g-o/g-orp.htm

SAR Publications:

SAR publications currently available via the SAR Program's web site include:

U.S. National SAR Plan (NSP) - The federal plan for coordinating civil search and rescue services to meet domestic needs and international commitments.

U.S. National Search and Rescue Supplement (NSS) to the International Aeronautical and Maritime Search and Rescue (IAMSAR) Manual - Provides guidance to federal agencies concerning implementation of the NSP and builds on the baseline established by the IAMSAR Manual. The NSS provides guidance to all federal forces, military and civilian, that support civil search and rescue operations.

U.S. Coast Guard Addendum (CGADD) to the U.S. National SAR Supplement - Establishes policy, guidelines, procedures and general information for Coast Guard use in search and rescue operations. The CGADD both compliments and supplements the NSS and IAMSAR.

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When you have finished reading your copy of On Scene, please take the opportunity to share it with someone interested in Search and Rescue. **o/s**

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Mass Rescue: Empress of the North



May 14, 2007, JUNEAU, Alaska - Passengers of the Cruise Ship Empress of the North being offloaded onto the Coast Guard Cutter Liberty and volunteer civilian vessels after running aground at 2:00 a.m. The Liberty took on 130 of the 248 passengers before offloading them onto the passenger vessel Columbia, which transported them back to the city of Juneau. (Official Coast Guard photo by Petty Officer Chris Caskey)



Passengers of the Cruise Ship Empress of the North on the Coast Guard Cutter Liberty. All 248 passengers were offloaded from the cruise ship uninjured and transported back to Juneau. (Official Coast Guard photo by Petty Officer Chris Caskey)