

ON SCENE

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



Summer 2004

COMDTPUB P16100.4



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ON SCENE is a semi-annual, authorized special interest publication produced by the Office of Search and Rescue for members of the U.S. Coast Guard and the SAR community. Editorial content is not to be considered authority for official action nor record material. Individual views and opinions do not necessarily reflect those of the Department of Homeland Security or the U.S. Coast Guard.

We strongly encourage readers to submit articles or letters to the editor. Though we make every effort to publish all submissions, we do reserve the right to refuse publishing articles that are not consistent with our objectives. Furthermore, we reserve the right to edit articles for length, accuracy and grammar.

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Notice to librarians:

The last issue published was the Fall 2003 edition.

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Front / Back Covers: USCGC Campbell, a 270-foot medium endurance cutter, prepares to tow the fishing vessel *Triunfo* after its propeller became fouled with a net.

Photos and story by First Coast Guard District/USCGC Campbell

NOTE ON NEXT EDITION: The Fall/Winter Edition of *On Scene* will not be published. In lieu of this next edition, Search and Rescue will be featured in *Proceedings of the Marine Safety Council*, *The Coast Guard Journal of Safety at Sea*. Regular subscribers of *On Scene* will receive a copy of this publication.

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ISSN: 0093-2124

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



“Coast Guard...I Need a Lifeline”

Greetings shipmates!

I'm sure all of you are familiar with the TV show, “Who Wants To Be a Millionaire,” where a contestant will attempt to answer harder and harder questions posed by the show's host, Regis Philbin, as the money at stake grows in an exponential manner. The first several questions are no-brainers — and are analogous to a “gimme putt” — something so simple, nobody will miss it. As the contestants start vying for some serious money, however, the questions become more and more difficult, causing some angst and nervousness along the way — even if they're pretty sure they know the answer. Then, at some point during their quest for the cool million, a contestant will undoubtedly become stumped because they're not at all confident in their ability to choose the correct choice of the four potential answers...and it's at that point where they reluctantly say ... “Regis — I need to use a lifeline.” At that point Regis will give them some options...a Phone Call, a 50/50 Split or ask the audience; all provided to help give the contestant new life and to help keep them in the game.

What's my point here? When a mariner is in trouble, when they're not confident of their abilities or the situation they're in, when they're up against something they can't handle...we're their “lifeline.” When they cry out for help, we're that voice of calm at the other end of the radio that they need to hear to let them know that we have them and that they're not alone with the elements; and that we will stay their with them — and to give them hope and the confidence of knowing that we will immediately pull the trigger and dispatch a boat crew, air crew or cutter to respond if they're in distress. The Coast Guard has invested billions to enhance our capability to respond to SAR...new cutters, aircraft, small boats, communications infrastructure and more — but it's all for naught without you...the human element; that part of our capability that brings a face, a voice and a professional demeanor to bear to acknowledge and respond to their situation. When a mariner is in distress, the first thing out of their mouths is a “Mayday” call for help — the second thing is a hopeful prayer that we've heard their call and that we're responding. We can all be proud of our tradition of service in aiding those in distress...from the early days of the Lifesaving Service to the present. Whether you are an OS, J.O. or civilian watchstander, an aviator, a cutterman or a boat crew member — you're part of their “lifeline” to keep them and their loved ones in the game...to help keep them eligible for the biggest prize of all. Be vigilant...be “always ready” for that call. It's coming....

Captain Steve Sawyer, USCG
Chief, Office of Search and Rescue

From the Director of Operations Policy

Command Centers Adopt New Strategies for Multi-Mission Excellence

For years the United States Coast Guard has enjoyed the well-earned reputation as the expert in Search and Rescue. Our Rescue Coordination Centers have led the way, showing the nation and the world that “we’re always ready for the call.” Our ability to coordinate a collective response to distress incidents and save lives is the benchmark for excellence throughout the SAR community. We must not and will not lose sight of this as we transform mission priorities and capabilities as an operational agency within the Department of Homeland Security. Global issues, internal and external drivers like the war on terrorism, Deepwater, Rescue 21, and Ports and Waterways Coastal Security (PWCS) make 2004 a most challenging and exciting time. And once again our RCC/Command Centers are asked to lead the way by modeling SAR program effectiveness into the emerging multi-mission command and control nodes – ensuring we are always ready to coordinate *all* missions to meet the same high-level of success we have earned in conducting world class SAR operations.

Traditionally, District Rescue Coordination Centers and Group Operations Centers have been dedicated to the management of search and rescue cases. This paradigm is rapidly changing...especially with the advent of newly created Sector commands. Our reliance on these “nerve centers” to provide accurate and timely information to all levels of the command for all mission areas cannot be overstated. With the implementation of new technologies, the addition of multiple mission management in the daily watch, and the necessity to maintain Maritime Domain Awareness (MDA) around the clock, program managers have been compelled to completely rethink command center staffing requirements and watch stander qualifications.

As the command center duties dramatically expand beyond SAR, it is imperative that the humanitarian principles embodied in our lifesaving mission also expand into our homeland security missions. It is part of our heritage and our commitment to the public. Our SAR Controllers will continue to be viewed as world leaders within the search and rescue community. Our standards of excellence in search planning, asset management, and communications must be maintained; and the newly envisioned scope of command center operations will be accomplished through implementation of staffing and technology improvements to provide eventual relief to those already burdened. For instance, the Common Operating Picture will provide a real-time status of resources. This enhanced system will also afford the operator the ability to view multiple screens simultaneously rather than requiring a separate application to be individually accessed. Sensors, tracking systems, and improved communications equipment aboard aircraft and vessels will also contribute toward reducing the “participatory management” of the watch. Conversely, effective SAR planning and coordination are fully dependent upon detailed and continuous interventions.

The establishment of the Operations Specialist rating is also a tremendous benefit to command center functionality because it serves as a dedicated career path for operations excellence. By developing a rating specifically tailored to the application of those skills deemed most necessary for watch effectiveness, Sector Commanders will soon begin to receive newly assigned watch standers with critical knowledge and real-world experience. They will arrive, not ready to train, but ready to work.

Watch standers are continuously challenged with decisions to prioritize one mission against another. Fortunately, with the creation of Sector Command Centers and the application of Maritime Domain Awareness tools, they will be better prepared than ever to do what they do best – coordinate responses, accomplish the mission, and ensure that all levels of management are appropriately informed. In this way, we will continue to show the world, “we’re always ready for the call.”

Semper Paratus.

Rear Admiral Jim W. Underwood
Director of Operations Policy

Managing Risk and Readiness in SAR Missions

By Dr. Carlos Comperatore

Personnel required to stand on-call duty are prone to experience fatigue, performance degradation, and reduced safety, particularly during periods of high operational tempo. In addition, work schedules requiring frequent rotations from nighttime to daytime duty hours can induce shiftwork maladaptation, a clinical condition similar to jet-lag. This paper explores the effect of fatigue on readiness, and provides guidelines toward optimizing the readiness of personnel standing on-call watches.

The Physiology of Readiness

Crew readiness is largely a function of fatigue. To understand how fatigue and readiness can be controlled, therefore, we must first understand the human requirement for sleep, and how the human body naturally regulates sleep.

Sleep Requirements: The human brain requires approximately 7-8 hours of uninterrupted sleep to restore the body's cognitive and physiological resources. During sleep, the brain cycles through periods of light, deep, and dream sleep, with each cycle requiring approximately 90 minutes to complete. Any interruption to this process due to noise, bright lights, or movement interrupts the sequence and causes the brain to spend more time in light sleep. The consequence of sleep disruptions throughout a sleep period is lack of sufficient deep sleep and dream time for the body to fully restore its cognitive and physiological resources. Sleep debt, with commensurate readiness degradation, must then necessarily ensue.

The Biological Clock: Optimally, sleep must take place during a period of time established by the regulatory influences of the body's internal biological clock. This clock system (details in next section) regulates the timing of sleep onset and wake-up time. Due to evolutionary

pressures and physiological characteristics, the human body is predisposed to work during daylight hours and sleep during nighttime hours. The body's clock system maintains a sleep/wake schedule in synchronization with local sunrise and sunset and the concomitant duration of daylight hours. The human body is naturally predisposed to sleep during the night and expend energy during daylight hours. The biological clock regulates energy cycles so that alertness increases after wake-up time and peaks in the mid-morning hours, then dips in the afternoon hours, peaks again in the early evening hours, and begins to decrease in the early night, reaching daily lows in the middle of the night.

The exact time of the peaks and lows depends on certain inputs to the biological clock system, namely wake-up times, bedtimes, and the amount of daylight exposure. Personnel exposed to work schedules that provide day-to day-consistency enjoy the benefits of a well-synchronized biological clock; namely, synchronization of their daily sleep period with their daily restoration period. In contrast, work schedules that impose frequent changes in work schedules, or transitions from daytime to nighttime duty hours, or long-duration work hours disrupt energy restorative processes and induce fatigue.

The Pathology of Fatigue

Personnel accustomed to waking up in the morning hours and reporting for duty at approximately 0700 will likely work during daylight duty hours and sleep during nighttime hours. Their biological clock will be day-oriented, thus synchronized to provide energy and cognitive resources during daylight and evening hours. Two peaks of alertness and energy availability will take place throughout the day, one in the morning and one in the early evening. Day-oriented personnel will normally experience troughs in energy and alertness immediately upon awakening, sometime in the mid-afternoon, and prior to sleep between sunset and bedtime. This pattern of energy availability will be maintained consistently provided personnel obtain good-quality sleep (uninterrupted sleep in quiet and dark environments) daily for 7-8 hours.

Interrupted sleep and reductions in duration to less than 6 hours per day will result in the accumulation of daily sleep debt. The consequences of this sleep debt will be first experienced in the degradation of alertness, decision-making ability, and mental function requiring logical ability. Persistent sleep debt throughout a week will result in increased daytime sleepiness and degradation of performance in

continued on following page

cognitive and psychomotor tasks

Disruption in the daily adjustment of the biological clock can also add to the degradation of alertness and performance. For instance, maintaining a summer work schedule that requires waking-up in the early-morning hours (0500, for example) every other day, and allowing a later wake-up time (0900, for example) on the rest of the workdays, will send conflicting signals to the biological clock. On the days that wake-up times are required in the early morning hours, the clock will receive the signal to advance bedtimes and wake-up times. Conversely, on the days the clock does not receive the early-morning signal, bedtimes and wake-up times will be allowed to slip to a later time.

These changes are associated with changes in the alignment of daily peaks and troughs of other physiological events, such as the core body temperature, cellular metabolism, and the production and release of hormones, including cortisol (stress related), melatonin (regulates sleep), and growth hormone. The biological clock system requires approximately three days to re-adjust to any new input, such as an earlier bedtime and or a later wake-up times. This re-adjustment will take place if the new sleep/wake schedule is consistent from day to day. However, if the inputs are inconsistent, the clock's timing can become disorganized in such a way that the physiological rhythms under its control will no longer be expressed in a predictable pattern, resulting in a lack of alertness, severe sleepiness, insomnia, degradation of mental alertness, and degradation in mental and motor performance.

The synergistic effect of sleep debt and biological clock disorganization can lead to chronic fatigue symptoms, jet-lag like symptoms, and the exacerbation of psychological maladjustment symptoms,

such as irritability, depression, and sometimes psychosis. Other physiological symptoms associated with this condition include cardiovascular disease and gastrointestinal disorders.

Managing Readiness

If a normally daytime on-call watchstander is asked to conduct a mission after midnight, sleep duration will be shortened and performance will be affected by fatigue during the mission. For instance, at a boat station, a call at 0200 to a B-0 crew requires performance during a time of day that the brain normally uses for sleep. The sleep obtained between bedtime and the call (say, 2200-0200) results in incomplete restoration of energy and cognitive resources. The crew responds at less than optimal readiness, therefore, their compromised state increasing the risk level to the mission.

However, this is the practical reality of the on-call status; crews will normally conduct missions enduring some level of fatigue and performance degradation. Training, appropriate crewing levels for each mission, and physical conditioning can help mitigate the effects of sleep debt following a first call. After this first call, however, crewmembers enter a Hi-Risk Zone of performance and alertness that can be mitigated only by uninterrupted sleep. After returning from the first call, the crew involved needs a period of at least five uninterrupted hours of sleep in order to minimize fatigue during a second mission.

The five-hour rest period, although not optimal, serves to compensate for the loss of sleep during the night, and partially meets the brain's requirements for uninterrupted sleep. If the same crewmembers sleep for five hours during the night after the first case, they will be fit

to respond to a second case. On the second call, their fatigue status only moderately increases the risk level of the mission. If these crewmembers are expected to respond to a third case, they must nap upon return from case #2. A minimum of two-hours of good-quality sleep is required to enhance alertness levels. Although this crew's readiness status remains compromised, the nap period will help to control the adverse effects of fatigue on performance during a third case. If at all possible, however, their participation in a third case should be avoided, particularly during missions or calls expected to exceed more than one hour in duration.

In any on-call period, a call to a mission during the late-evening hours will predispose the second call to fall within the Hi-Risk Zone. The following chart provides examples of Hi-Risk Zones and sleep requirements associated with hypothetical missions. Mission duration can vary from the time depicted below.

Sleep at any time (inside or outside the Hi-Risk Zone) must be of good quality. Any disruption of the sleep period by way of piped announcements, motion, noise, or light will degrade the quality of the sleep and keep personnel within the Hi-Risk Zone. The only way out of the Hi-Risk Zone is by mean of good-quality sleep of at least 5 hours in duration, preferably 7-8 hours. If these physiological requirements are not met, there are no non-pharmacological methods to prevent fatigue from degrading performance. Consequently, the risk level in the second mission increases and safety degrades.

Naps of at least two hours following the first mission will help maintain alertness during the second mission, provided the second mission is of short duration (one hour or less). Risk and performance degradation increase to unpredictable

Usual Bedtime	Time of First Mission	Duration of Mission	Hi-Risk Zone Begins at	Minimal Sleep Required
2200	1900	4 hours	2300	5 or more hours
2200	2200	2 hours	0000	5 or more hours
2200	0200	2 hours	0400	5 or more hours
2200	0400	2 hours	0600	5 or more hours
2200	0500	4 hours	0900	2-hour nap

levels as mission duration exceeds one hour, as fatigue contributes synergistically to weather conditions and overall mission difficulty.

Readiness can enter the Hi-Risk Zone even when work occurs during daylight hours. For example, during routine duty, when crews have slept during the night, periods of work exceeding 12 hours will inevitably result in fatigue and performance degradation. In these cases, 2-hour naps can restore endurance and control fatigue.

Concluding Remarks

On-call watchstanders can incur heightened levels of fatigue as a result of normal operational interruptions to their sleep cycle. These heightened levels of fatigue increase the level of mission risk; the more frequent or lengthy the interruptions, the higher the risk. Crewmember fatigue and mission risk can be mitigated through the strategic use of sleep periods of at least five hours duration, or naps of at least two hours duration.

Dr. Comperatore is a member of the Crew Endurance Team at the Coast Guard's Research and Development Center in Groton, CT.

ED. NOTE: Directions concerning crew endurance management can be found in:

U.S. Coast Guard Boat Operations and Training (BOAT) Manual, COMDTINST M16114.32 (series)

U.S. Coast Guard Air Operations Manual, COMDTINST M3710.1 (series)

ALSO SEE:

U.S. Coast Guard Guide For The Management of Crew Endurance Risk Factors, R&DCEN Report CG-D-09-01, dated May 2001. o/s

Back to School

By BMC James Shelton

During an OPSTAN evaluation, member information data is collected consisting of all command cadre and controllers, their previous assignments, time in grade, time in service, and time in current job assignment. All of this information is used to identify trends and track where SAR controllers come from and what previous training they may or may not have. Prior to the development of the OS rating and their specificity to the Command Center, this information was extremely useful in determining the previous skill based training or non-training that made SAR controllers either successful or unsuccessful at their jobs. Even with the stand-up of the OS rating, this information is still insightful as "first generation" OSs come from many different jobs and rating backgrounds.

One other interesting "data call" item captured on the OPSTAN checksheet, is each member's SAR School graduation date. The current Coast Guard Addendum states that TQC shall refer any request to re-attend the Maritime SAR Planning (MSP) course that falls within 3 years of the requester's previous MSP graduation date to G-OPR for approval. One could interpret this to mean that those members who have not attended within 3 years should apply and his/her request could be approved by TQC without referral to G-OPR. The OPSTAN Team has documented many individuals who have asked "Shouldn't I go back to SAR School sometime in order to receive training on new techniques and skills?" The answer is "Yes"

A qualified SAR Controller who has not been to school since 1998 (before the Automated Manual Worksheet (AMS) days), should seriously consider re-attending the National SAR School. The methods, skills, and management techniques that are being taught now have significantly changed. Yes, there are SAR controllers presently serving who have gone from Command Center to Command Center to Command Center and are serving in their watch position without any difficulty or lack of comprehension in the newer methods or techniques. But think about it for a moment; where else are you going to be able to remove yourself from the watch bill, totally immerse yourself in the detailed and specific training, and come away with documentation and a new appreciation for the life and death job which you are assigned to?

Command cadre, OPCEN Supervisors and controllers should make every attempt to attend SAR School when they feel that they have lost the comprehension of the intricate tools that are being used in their watch station. If these personnel are being assigned to subsequent tours as a SAR Controllers, with either a break between duty tours or not, they need to assess whether they should re-attend SAR School. Command cadre and OPCEN Supervisors should support personnel in attaining newer skills by submitting a Short Term Training Request (STTR) through proper channels for anyone at a Coast Guard unit that is responsible for search planning. If necessary, be sure to include supporting remarks to the STTR to state any special reasoning for re-attending SAR School classes.

The bottom line: If you perceive that your SAR skills have deteriorated or may not be as sharp as they could be, and you haven't been to SAR School in a while- **get back to school!** You owe it to yourself as a professional, your command as a watch stander, and to our public who is expecting the sharpest search planning skills in the difficult mission we perform.

Chief Shelton is a member of the OPSTAN Team Staff at the National SAR School, USCG Training Center, Yorktown, Virginia. o/s

Probability of Success

– A Paradigm Shift?

By LT Kevin M. Jones

THEN... SAR Controller: “Good evening Captain, the HH-65 has just completed search area B-1 with negative results. The POD for this individual search was 54%, giving us a cumulative POD of 98% for this case. Recommend that we suspend this case.” Captain: “98%... Ok, I’m comfortable with that. Go ahead and suspend the case.”

NOW... SAR Controller: “Good evening Captain, the HH-65 has just completed search area B-1 with negative results. The POS for this individual search was 34%. The POS for the Alfa search was 65%. Recommend that we suspend this case.”

Captain: “34%... Seems pretty low. What was our POD? What was the on scene weather? What is the survivability given the water temp? District’s not going to be happy if I’m suspending a case with only a 34% POS...”

Ok, this is a pretty simple example (and is not taken from any real life example!), but I think it illustrates a point that is tough to come to terms with when it comes to making those always difficult case suspension decisions. We are teaching our controllers to focus on a better measure of search effectiveness. Probability of Success (POS) instead of Probability of Detection (POD). As you recall, POS is simply $POD \times POC$ (Probability of Containment – the possibility that your search object is in your search area). So, is POS a paradigm shift? No. And yes...

No because POS has been around for a long time. CASP has used POS since the 1970s, when POC was referred to as POA (probability of area). The trick has always been to *quantify* POC. We have tables that will give us POD; that’s fairly simple to compute. Trying to put a percentage on the possibility of the search object being contained in the search area is a different story. With the advent of JAWS, we can now determine POC, and thus obtain POS. But JAWS has its limitations. The POS will be for that individual drift. JAWS will not give you a cumulative POS for your case, nor will you be able to calculate one. Even CASP can’t give you a cumulative POS, however CASP can take previous searches into consideration when determining subsequent searches.

Yes because POS should not be *the* criteria when it comes to suspending a search; much as POD was in prior years. I think that maybe too much emphasis was placed on POD when deciding when to suspend a case in the past. POS (and POD for that matter) is simply an entering arguments used to help decision makers make that call. Obviously there are many other considerations to be taken into account when making these critical decisions; i.e. survivability, weather, available resources, risk management, etc. I’m not saying that these factors weren’t taken into account in previous years, just that there was *too* much emphasis on POD.

So does POD still have its place? Absolutely! There will be many instances when the controller will not be able to obtain a quantifiable POC. First light searches for flare cases are a great example. You drift a flare cone for the first light search, but you can not determine the POS because you can’t quantify POC. You can determine that the POC is greater than 50% (if the area encompasses all Total Probable Error (TPE) circles), but you can not put a percentage on it with any real degree of accuracy. And of course POD will always be used for those initial searches when drift has not yet been computed and you need to assign track spacing.

The paradigm shift really comes from the way we look at the percentages. No longer is there an “optimal search” with a coverage factor of 1, yielding a POD of 78%. The “optimal search” will now depend on the assets that you can bring to bear and how JAWS and/or CASP will allocate those assets to optimize your POC and POD to give you the best chance of finding your search object. Why is this a paradigm shift? Because controllers can obtain just about any POD desired by manipulating the track spacing of the SRUs. The only way to increase POS? Add more SRUs. Plain and simple. Therefore it becomes impossible to assign a “target” POS because it will vary from case to case. There may be times when you can obtain a 90% POS for an Alfa search. Other cases that span multiple days may result in a POS of only 20%. In either case it’s going to be the best POS that you can get given your search assets, weather and search object.

There is always the “uncomfortable period” whenever there is a paradigm shift. We are knee deep in that uncomfortable period now. But, it’s the right thing to do and we are definitely making progress!

LT Jones is the Assistant School Chief at the National SAR School, USCG Training Center, Yorktown, Virginia. o/s



- Update

By Kathryn Manzi

The transition of the Coast Guard to the Department of Homeland Security and post 9/11 requirements has brought about many changes that affect Coast Guard operational missions. Key headquarters offices met to discuss many issues that focused on how Rescue 21 (R21) will fit into our future Sector Command Centers (SCC). These issues included:

- Establishment of an enterprise Geospatial Information System (GIS) architecture,
- Emergence of encrypted, AIS-based Blue Force Tracking (asset tracking) as a potential USCG standard,
- The need to integrate R21 into the Hawkeye core C2 system and SCCs, and
- Relocation of some R21 Group Communications Center (GCC) sites to new SCC sites.

As a result, a Performance Gap Analysis will be conducted to better understand post 9-11 requirements for Rescue 21.

The initial step necessary for R21 to transition from Group Command Centers to Sector Command Centers is redefining the AOR boundaries. Once defined, General Dynamics Decisions Systems (GDDS), the R21 contractor, can continue planning the implementation of the system and properly configure the remote fixed facilities (high-level sites) for each SCC AOR.

Asset Tracking or Blue Force Tracking is being developed within the R21 system. The Hawkeye system is looking into encrypted AIS to fulfill this requirement; a prototype is scheduled for testing in Miami this summer. Rescue 21, however, is experiencing a contractual delay with the development of the asset tracking software due to a technical error within the Motorola radio, which is being corrected by Motorola. Once corrected, GDDS will continue the software development. The issue is whether or not to continue with the R21 asset tracking development or wait for encrypted AIS. The Performance Gap Analysis will determine the solution.

R21 Core System Capabilities and Description Recap:

Asset Tracking – This upgrade will provide a continuous common operating picture of Coast Guard assets within a SCCs AOR. Coast Guard positions are recorded and transferred automatically to a chart on the terminal for real time visual display. Note: Assets not equipped with the Rescue 21 package will not transmit an asset-tracking signal. Assets will be automatically tracked even if they transit into adjacent AOR's. Once the assets pass into another AOR their signal will be automatically picked up by the SCC in charge of that region.

Digital Selective Calling – The basic functionality of DSC is described in Section 2.2 of the CG SAR Addendum, COMDTINST 16130.2D. In addition to the basic functionality, Rescue 21 also provides the ability to plot the DSC call on a geographic display and to rapidly

interrogate the MMSI database to obtain any available information associated with the originating MMSI.

Additional Channels – Every high level site will have 6 channels. One is dedicated to channel 16, one is dedicated to channel 70 for data only and one for UHF. The remaining 3 channels can be distributed to the regional station units for use at the SCCs discretion. For example, each high level site has 3 channels for general use, and if a SCC has 5 high-level sites within an AOR, then that totals 15 channels from which to choose. The SCC maintains full control of every high-level site at all times.

Enhanced Communications Coverage – The Rescue 21 communications coverage has been upgraded to receive a transmission of a 1-watt radio 2 meters high out to 20NM. **Note:** The majority of maritime radios are 5 to 25-watts and are higher off the water, increasing reception range.

Conferencing – Conferencing is a function that allows CG radio operators to communicate with various Federal, State or local agencies.

Automated Broadcasts – The automated broadcast feature can be used for single or repetitive radio broadcasts. The broadcast can either be recorded in the operator's voice or broadcast with a voice synthesizer. Once the broadcast has been composed, recorded and is ready for release, a prompt will confirm the request for release so that broadcasts are not

continued on following page

released prematurely. Additionally, the prompt will reappear each time the broadcast is to air. This will allow the operator to cancel the broadcast if it is no longer needed or change the broadcast as necessary.

Immediate Recording & Playback – Allows the operator to playback a recording and apply various programs to clarify unreadable transmissions.

Protected Communications – Provides the Groups and the mobile assets a protected communication conduit that utilizes over-the-air re-keying (OTAR) capability.

Some field personnel have inquired about a R21 training course. GDDS is in the process of developing the training course. The length and type of schedule have yet to be determined but it will be intensive and thorough and will provide all operators with a good working understanding of the system capabilities and its applications.

The Coast Guard is undergoing many changes over the upcoming years and the R21 communications system is not immune. There are several steps that the project needs to pass before R21 can be implemented into the field. A timeline cannot be assigned until the Formal Qualification Testing is complete. Flexibility

and adaptability will be the keys to success as new policies and procedures are incorporated into the Coast Guard's many missions. The goal is to provide the service with the necessary tools to make your job as efficient as possible. If you have any questions regarding the R21 system deployment please contact Mrs. Kathryn Manzi at 202-267-0810.

Kathryn Manzi is a program analyst in the Policy Division, Office of Search and Rescue, USCG Headquarters and SAR Program project specialist for RESCUE 21. o/s

The Challenges of Search and Rescue at Coast Guard's Marianas Section

By Mariannas Section Staff



MARSEC's Command Center holds a unique position in regards to accomplishing Search and Rescue related missions. Due to the close proximity of several other Nation's Regional Command Centers, including those of Japan, Taiwan, Indonesia, Papua New Guinea, Nauru, and the Philippines, language as well as custom barriers, and the varying degrees of SAR proficiency and training, are only part of the factors that confront watch standers in Guam.

A great deal of MARSEC's search and rescue is conducted in conjunction with these foreign RCCs. However, search and rescue units are limited, and local aircraft

are not available for immediate deployment. Therefore, in order to complete air-based search patterns, U.S. military aircraft must be requested from either Japan or Honolulu, leaving coordinators to plan around a two-day search gap, while awaiting their arrival. In addition, accurate datum is difficult to achieve, as the convergence of the northern equatorial and the equatorial countercurrent in the Federal States of Micronesia (FSM), as well as the interplay between these two currents and the FSM's islands and atolls, creates drift conditions which are difficult to predict.

Local SAR resources are also limited. As a result, MARSEC has established a joint effort known as Group Guam. Group

Guam, consisting of Guam Fire and Rescue, Guam Police Department, Andersen Air Force Base Fire and Rescue and HC-5 Naval Helicopter squadron, pools resources in order to assist MARSEC with the completion of localized SAR missions.

All of these conditions play a large part in MARSEC's SAR caseload. MARSEC's Command Center responds to a large number of cases that are generated by overdue vessels transiting within the islands and atolls of the FSM. The majority of these vessels are lacking in both proper safety and communication equipment, and due to certain cultural lack of urgency, Coast Guard notification typically does not occur until four to five days after the vessel's non-arrival. Additionally, a significant amount of over-dues have occurred during typhoons and rough seas, a sign that some mariners in the FSM may disregard local storm forecasts.

Needless to say, MARSEC's watch standers and SAR coordinators are faced with numerous challenges. Encompassing everything from language and cultural differences to inattention to safety and lack of resources. This creates a demanding and ever-changing undertaking for all involved. o/s

AUXAIR Night SAR

By Ron Darcey & LTJG Keith Blair

Coast Guard Auxiliary Aircraft 401MR had just leveled off at 3500 feet, homeward bound from a Flotilla Meeting at Air Station Sacramento, McClellan Field, CA. We departed only 6 minutes earlier. Prior to the meeting we flew a routine 5-hour afternoon safety patrol along the California coastline. All aboard we were ready to get home.

The twin engine Cessna 401 was piloted by Dennis Caponigro, a 20-year veteran Auxiliary Aviator and John Theilen, with pilots Gene Wheeler and myself acting as observers in the back.

Also aboard were two Auxiliarists, David Fernandez and David Oppenheimer, who were completing their Aviation Observer Training Syllabi. Although the California sky that dark night was clear with exceptional visibility, a thin ciriform cloud layer muted the full moon that hung dimly above. Outside the aircraft, the ground presented its usual kaleidoscope of tiny lights that spread out below as far as the eye could see. The horizon was a dim line far off in the distance. The engines beat out their steady drone tempting those in the rear cabin to be lulled into a half-awake slumber that was interrupted from time to time by air traffic control piping off a

steady stream of aircraft positions in the night sky. In the after cabin, Wheeler and I sat, backs to the flight deck watching the night slip past. Fernandez and Oppenheimer, seated mid-cabin facing forward, casually worked on training logs. Then, at exactly 2145, Coast Guard Group San Francisco crackled into our headsets requesting assistance to locate a distressed boater in the vicinity of tiny Sherman Island. We snapped quickly to attention. Theilen, guarding the marine radio, advised Caponigro of the request. As Pilot in

Command, Caponigro without hesitation answered in the affirmative. While Theilen began receiving initial data, the crew sprang into action. Cabin overhead lights were switched to bright sending their slender beams of illumination downward onto kneeboards and charts. Pencils logged the time and we anxiously awaited more data on the upcoming search. Silently, we each asked ourselves the same question: Could we locate the victims in this darkness,

continued on following page



Auxiliary Aircraft 401MR played a crucial role in saving stranded boaters in California's Sacramento River Delta

and how serious was the situation?

California's Sacramento River Delta is a boater's paradise, but without proper emergency equipment it can be a dangerous place when the weather changes. This is especially true when nighttime falls and winds off San Francisco Bay send temperatures plummeting. This was one of those nights; down below the cold wind was gusting and the water surface was churning.

Group San Francisco informed us that the boat had drifted onto Sherman Island, a small, reed-covered plot of land that lay across the channel from the cities of Antioch and Pittsburg. The Island is just one of the numerous small grassy islets that dot the delta region, which is made up of hundreds of miles of channels, bays, and tangled waterways. Although it was a clear, spectacular evening with the cities of Antioch and Pittsburg clearly visible, we were unable to visually locate the island below hidden in the inky darkness.

Although our experienced crew was very familiar with the region, the lack of moonlight that magically distinguishes water from land forced us to rely on an estimated position from Group San Francisco or Station Rio Vista. Caponigro asked Theilen to obtain a datum. Within moments Station Rio Vista provided latitude and longitude, which was then dialed into the airplane's Global Positioning System (GPS). Only a slight 4-degree course change was required. Sherman Island was only minutes away! 401MR sped on into the night hoping the situation was not too serious.

Bits of information trickled in through Theilen. We noted that there was no communication from the distressed boat over the marine band radio, so they must have been using a cell phone. This meant that all transmissions from the boaters would have to be relayed through Group San Francisco to the aircraft. Theilen began a running series of reports to us; the boater had lost power...had already expended all of his aerial flares...drifted onto the island...become entangled in the reeds...four men aboard.

We worried how we would be able to spot the distressed boaters if they had no signaling device.

Wheeler suggested that Theilen ask Station Rio Vista if the boaters had a flashlight, or could light something that would guide the aircraft to their location. Theilen came back with, "They have two hand held flares left!"

I offered a suggestion. "Tell them not to fire the flares until we have made two orbits over their position and they are sure we are over them."

Only a few thinly scattered lights on the tiny island could be seen, but nothing revealed the position of the disabled vessel. As Caponigro began his initial orbit to the left, I moved to the rear of the cabin, behind Oppenheimer to add a set of eyeballs to the search.

On instruments, Caponigro held the airplane in a smooth, standard rate turn

pointed. He nodded, grinned and snapped off a thumb's up as he glanced back. He and Wheeler had seen it too. There the boat was on the southeastern edge of the island.

Caponigro continued to orbit until Theilen relayed the boat's position to Group San Francisco who then dispatched the awaiting boat crew from Station Rio Vista. After Group San Francisco confirmed the fix, Theilen requested we be released from SAR because there was nothing more we could do. Once released, Caponigro eased the Cessna 401 out of its turn and back onto its original course for Livermore airport.

After shutdown and a short debrief from Caponigro, I asked Fernandez if he had recorded the time the flare was sighted. "Twenty-two, oh four," he replied with a satisfied smile. Only 19 minutes elapsed from receiving the initial request until the



The crew of 401MR from left to right: David Fernandez, Ron Darcey, Dennis Caponigro, John Theilen, David Oppenheimer. Not Pictured: Gene Wheeler

while Wheeler, Oppenheimer, Fernandez and I searched for a signal that we hoped would soon glean the boater's position. One quarter of the way through the second orbit: THERE...just above the tip tank, a flare flashed into a tiny, molten red dot. I tapped Oppenheimer on the shoulder and

flair popped. It was one of those fortunate times in which help was in the right place at the right time, especially for a group of stranded boaters waiting for help in the darkness of a cold and windy night.



Auxiliary Aircraft 3198X circles over the same location where they located a stranded boater in the summer of 2003.

After Action Report: Four young men launched from Antioch earlier in the afternoon of 12 April 2004 for a cruise aboard a 16-foot runabout. At approximately 1700 an alternator failure followed by a complete engine shutdown resulted in their being swept into Sherman Island and becoming tangled in the tall reeds. The four began signaling with flares around 1730, but their situation did not become critical until the winds picked up and the temperatures fell after dark. At approximately 2145, while 401MR was flying through the area, Coast Guard Group San Francisco called upon them to aide in the search. Soon after the aircraft located the boaters, a Coast Guard vessel found the group so entangled in the reeds that it required three hours to free and tow the boat to safety. The thankful foursome was found in good condition.

The crewmembers of Auxiliary Aircraft 401MR typify the dedication and professionalism of District 11 Northern Region's (D11N) Coast Guard Auxiliary aviators. This group of retired military members, business owners, professionals, and young men and women continue to volunteer their valuable time and service to the Coast Guard. Everyday they fly routine safety and homeland security

patrols, personnel transport, logistic flights, Aids to Navigation missions, and most importantly SAR. Auxiliary aircraft locate missing boaters and downed aircraft, vector surface assets to the scene of accidents, support marine pollution cases, provide area familiarization flights for Coast Guard active duty personnel, transport VIPs (including the District 11 and Pacific Area Commanders and Chief of Coast Guard Aviation) and provide logistical support for both Air Station San Francisco and Air Station Sacramento. During the 9-11 anniversaries and consequent increased threat levels, D11N Auxiliary members stepped up to provide extra patrol coverage. In 2003 Auxiliary aviators flew in over 24 different SAR cases, helped save or assist 46 lives, and in many of the cases were the first on scene to deliver accurate positions and time critical information.

Air Station San Francisco has four HH-65B Dolphin helicopters that fly every day on homeland security patrols, training, SAR and law enforcement missions. It is responsible for the California Coastline from south of Big Sur to Point Arena and as far inland as Wyoming. It would be impossible for the air station to provide complete coverage of its large Area of Responsibility (AOR) without the support of Auxiliary aviation. The D11N Auxiliary Aviation

Squadron, which is managed by Air Station San Francisco, has over 55 members and 25 aircraft spread throughout the AOR, as far South as Monterey, North to Sacramento, and East in Tahoe. These aircraft range from small Piper Cubs and Cessna 150s, to large twin engine Cessna 410s and Piper Cheyennes—even a Bell 47 helicopter! Auxiliary squadron regulations mirror active duty Coast Guard regulations very closely due to Air Station San Francisco's new Auxiliary Aviation Squadron Guidance manual. Every member has to pass the same swim test that active duty personnel endure every year, they must undergo annual standardization and SAR Check Rides and each member must pass an FAA Third Class flight physical. Each aircraft must meet rigorous standards set by the Coast Guard to include required shoulder harnesses, GPS or Loran positioning systems and Marine Band radios. The cost per hour to operate an HH-65 Dolphin with a full active duty crew is in the thousands of dollars per hour. The cost to operate a Piper Cub with a Coast Guard Auxiliary crew is approximately \$65 per hour. On any given day, one of our Auxiliary aircraft can be airborne and in the vicinity of a SAR case within minutes. D11N Auxiliary aviators proudly live up to the Coast Guard motto "Semper Paratus" and serve daily as an effective part of Team Coast Guard. That is especially true here in the Eleventh Coast Guard District.

Further information about the Air Auxiliary Program or Air Station San Francisco's Air Auxiliary Squadron can be obtained from Mr. Ron Darcey (CarolynDarcey@msn.com) or LTJG Keith Blair (Wblair@d11.uscg.mil).

LTJG Blair is assigned to USCG Air Station San Francisco & Ron Darcey is a USCG Auxiliary Pilot. o/s

When an Uncorrelated Mayday Isn't...

By LCDR Dale C. Folsom

—“*Mayday, Mayday...*”

We've all heard this familiar call many times over Channel 16. The watch standers at Group Mobile and Group New Orleans heard this particular call on a bright, sunny afternoon in April 2004 across five high-level communications towers (high sites).

The watch standers called out to the vessel in distress, but received no answer. There were no reports of trouble or overdue vessels to correlate the call with. The recording of the caller's voice showed it to be flat and monotone, and there was no inflection suggesting actual distress. Could it be someone incorrectly testing his radio or transmitting a hoax (both are frequent in the area), or might it be a worst-case scenario where someone on a sinking boat has only an instant to get off a distress call before treading water? Regardless of the source, they treated it as an emergency. Since it spanned two Groups, the watch standers at the District Eight Command Center (D8CC) immediately assumed control of the case.

They followed the book for guidance and they also relied on experience and intuition. This case was puzzling from the start: it was not normal to hear radio transmissions over five high sites because of the limited transmitting power of VHF-FM marine radios. Using a 25-mile radius of reception as a rule of thumb meant the call could have come from a 110-mile wide area stretching from Gulfport, Mississippi to Pensacola, Florida. It could be as far as 25 miles into the Gulf of Mexico or in one of the many associated bays and tributaries along the coast.

Four of the five high site range rings intersected just south of Mobile, Alabama.

The watch standers assumed it was a great day to have extended radio ranges, so they expanded the high site range rings a bit to see if all five would intersect. After further analysis and discussion with the Senior Controller, they settled on a search pattern that covered the converging areas. D8CC launched an HU-25A Falcon jet from ATC Mobile who flew the pattern in daylight with excellent search conditions. The search locale was inside a string of coastal barrier islands where sea conditions were calm. The area was populated by many vessels, none of which heard the original Mayday. After no sightings, the aircraft returned to base.

After dark, there had been no response to the vessel callouts or the Urgent Marine Information Broadcast that had been issued, and there were still no reported overdue vessels or signs of distress. After nearly 10 hours of investigation and searching, case suspension was granted at 1945. Just like a hundred other times.

Another hour passed, and then a curious thing happened. Group New Orleans called to report that a passing vessel had picked up two young teenage boys from a lighted piling navigational aid in the Gulfport Ship Channel.

The cold and tired boys reported that their 28' pleasure craft had suddenly swamped and sank while their father had been trying to anchor the boat at about noon that day. They had only enough time to call out on the radio “Mayday, Mayday” before the boat slipped under the waves. The earlier uncorrelated Mayday case just became correlated. Although they had sunk nine miles from shore and the water was a chilly 67 degrees, they had the good fortune to sink near a moderately traveled channel where there were light structures to clamber onto. They had tried to flag

down other vessels that passed within 10 feet of the light, but no one saw them.

But where was their father? As the boy's story unfolded, it became apparent that Dad was no longer in the vicinity. After the boat went down, the trio swam to the barnacle-encrusted pilings that held light 36. Dad allowed the kids to stand on his shoulders and crawl onto the pilings. Unfortunately, he couldn't get up onto the structure himself. After struggling in the water a while, he donned two life jackets and began to swim towards Ship Island, three miles away, but farther from shore. Although he was only 44 years old, he suffered from substantial health problems and was wearing only shorts and a tee shirt. Combined, these factors significantly reduced his chances for survival.

Group New Orleans assumed control of the case. Remembering the admonition from SAR school to “Hit it hard, hit it fast,” the Group diverted a 41' UTB from Station Gulfport and D8CC launched an HH-65A from Air Station New Orleans. The helicopter inserted a datum marker buoy (DMB) to gauge water movement and began searching with the small boat. Both searched throughout the night. The Sheriff's Department from Harrison County, Mississippi and the Mississippi Department of Marine Resources also aided in the search efforts. The man wasn't on Ship Island nor was he on any of the other light structures in the area.

More searches continued at first light using existing search assets and an HU-25A from ATC Mobile, a 26' small boat from Station Gulfport, another helo from Air Station New Orleans, and the CGC Pompano home ported in Gulfport. At about 0700, the Canadian Cold Exposure Survival Model predicted the man would be dead from hypothermia. But of course,

no one was willing to give up just yet. After all, the man had on two life jackets that would provide additional warmth and flotation, and he had two young boys to think about. Everyone knew it would just be a matter of time before he was located, but would we be too late?

It was after 0800, and the man had spent 20 hours in the water. He had drifted past Ship Island, and was more than seven miles from light 36. Yet, this was to be his lucky day. The DMB was drifting in the same direction as the man, and searches were expanding towards him.

“Mark, mark, mark!” cried the eagle eyed AMT3 Dave Keppler from 500 feet above. Keppler, a Falcon Dropmaster, was flying with the rest of the crew of CG 2121 at a speed of 180 knots. On leg 21 of their assigned search pattern, Keppler thought he saw a man in the vast expanse of water below out the left window. The Falcon circled and spotted the boy’s father waving his arms.

The crew relayed the good news and vectored in help for the man. Eight minutes later, two helicopters from Air Station New Orleans and the 26’ boat were on scene. Rescue 6514 from Air Station New Orleans quickly hoisted the man and took him to

Gulfport General Hospital, where he was treated for exposure and released.

Of the many lessons to be learned here, two stand out. First, the man wasn’t affected by hypothermia as much as predicted. Besides the life jackets, this average-build man was clad only in light clothing. This clothing is perfect for a sunny spring afternoon, but not very helpful in cold water. He also had significant health problems. The hypothermia model predicted he would have lost the ability to function (swim, wave, etc) during the night, and it predicted he would be dead an hour before he was actually found. While we all use the model as a guideline, the hoist cam video shows a man that was not ready to give up his fight for life anytime soon. Perhaps it was the extra warmth or lift out of the water provided by the life jackets, or perhaps it was his will to live and see his family again.

Second, searching in the area of intersecting high site range circles didn’t work in the uncorrelated Mayday case that preceded this sunken boat case. The boat sank 33 miles from the initial search area where the circles intersected, and 85 miles from the farthest high site. As a matter of fact, the boat sank at the extreme western

edge of the five high site ranges, and logically should have been heard by only one or two towers. The actual performance of these high sites was a great deal different than the standard 25-mile ranges we typically assign to high sites.

So, if it happens again today, how will we prosecute the case differently? Searching the 2,900 square mile water area that the high sites monitor would be impractical. If a Falcon searched for a person wearing a life jacket as in this case, it would take 52 hours of on scene time. That’s a lot of time to dedicate to an uncorrelated Mayday. For better or worse, the final answer will probably be similar to our initial response. Follow the book, use our head, think of what might have happened, send assets, and hope that we get more correlating information in time to save a life. And one other thing- eagerly await the advanced direction-finding equipment that the Rescue 21 System will bring us to help pinpoint these distressed mariners.

LCDR Folsom is the Senior SAR Controller at the Eighth Coast Guard District in New Orleans, LA. o/s

USCG SAR Brief Job Aid Now Available for Unit Commanders

After several unit requests and many months of effort, the Office of Search and Rescue (G-OPR) is pleased to announce the completion and posting of a standardized SAR briefing available on the G-OPR Intranet Homepage. The SAR briefing, entitled “*The U.S. Coast Guard Search and Rescue Program – A Systems Perspective*”, was developed and designed to provide a modular, “canned” format, multimedia presentation for use by Unit Commanders addressing both public and private forums on the USCG SAR Program. The briefing covers various topics ranging from SAR foundational doctrine, SAR prevention methods, CG SAR Program standards, CG and Non-CG SAR assets, and SAR systems currently in use and planned for future

implementation. Available at <http://cgweb.comdt.uscg.mil/G-OPR/G-OPR.htm>, the modular formatted brief provides Unit commanders the functionality to tailor the information to the forum being addressed without losing sight or emphasis on the “Systems Perspective”. Also included within the G-OPR offering are canned

textual remarks recommended for use when presenting the brief to public or private audiences. The canned remarks contain informational points on subject matter that greatly assists in amplifying the actual brief content. Additionally, a short 2-minute film about the sinking of the Titanic during the discussions on SOLAS accompanies the brief and serves as one of the many highlights of this job aid tool. o/s



Welcome!



**The U.S. Coast Guard
Search and Rescue (SAR) Program -
A Systems Perspective**

Around the World with:



By Rick Kenney

22 LIVES SAVED BY AMVER SHIPS!

From time to time, ships participating in the Amver system respond to an ongoing distress without the direct involvement of an RCC. Below are two incidents in which the Amver-participating vessel proudly waved the Amver flag and conducted the rescue of 22 survivors. Each respective company and ship's Master reported the information to the Amver Maritime Relations staff in New York.

The first case involved the 684-foot product tanker M/T INCA, owned by Tsakos Energy Navigation Ltd. of Athens, Greece. While underway off the coast of Colombia, enroute Cristobal, Panama, a crewmember sighted a 7-meter capsized fishing boat with 4 persons on it and notified the officer on watch. INCA's Master, CAPT Kontomihis, who was on the bridge, changed his ship's course to assist and recovered three of the four, who had to be treated for shock.

Unfortunately, they advised that the fourth crewman was already deceased and had been tied off to the boat. The tanker's crew attempted to recover the body and take it aboard, but to no avail. M/T INCA was on charter to ChevronTexaco, and Company Official Ian Meadows advised Amver that the ship's crew had "gone the extra mile" in this rescue, with both the Chief Mate and Bosun jumping into the very rough seas, with a high easterly swell, to assist with the rescue and recovery effort. Within a few hours, the capsized boat was lost under the waves.

Upon the arrival of a Colombian Coast Guard vessel, an attempt was made to transfer the survivors, but was aborted due to the wind force 6/7 Beaufort. The

survivors were delivered in good condition to Panamanian authorities in Cristobal and transported to the Colombian Embassy for repatriation, as INCA began its transit of the canal to its next port of call in San Francisco.

Only two weeks later, on the other side of the world in the Arabian Sea, the Singapore-flagged container ship APL PUSAN collided head-on with the Panamanian product tanker Delta 1 in heavy fog. The tanker caught fire, broke in two and sank. The APL PUSAN was enroute to the port of Mundra from the Dubai port of Jebel Ali. The collision occurred off the western coast of India and, although the tanker was carrying diesel fuel, lube, gear and heavy oil, the Indian government expected no resulting environmental damage.

The DELTA 1 sent out a distress signal and its crew of (19) abandoned ship. The M/V KOTA TEGUH, a container ship also of Singapore registry, copied the Mayday call on VHF Channel 16. CAPT Peter Brakocevic turned his ship and proceeded to the position of the collision, 6NM away. Guided from the bridge, his crew lowered the rescue boat and made their way toward

the survivors. Within two hours 18 crewmembers were embarked in KOTA TEGUH.

There was zero visibility, a strong current and the tanker on fire during the rescue operation, which brought KOTA TEGUH within 0.7NM of M/T DELTA 1. All of the crew was in good condition except for the second mate, who suffered a fractured collarbone and a deep gash wound in his right leg. The APL PUSAN came about to recover the one remaining crewmember from the tanker for a full accounting of the crew of 19. In this case, the merchant ship even took the initiative to assume the duties of on-scene coordinator.

***Rick Kenney** is Chief of the Coast Guard's Amver Maritime Relations Staff located in New York, NY. o/s*

Overdue 18-foot *Sea Ray* in Northern Lake Huron

By: Jerome A. Popiel and LT Eric Peace

On August 26, 2003, two Michigan fishermen were reported overdue on an 18' Sea Ray pleasure craft amidst heavy weather conditions on northern Lake Huron, with little information regarding their last known position and intentions, water temperatures in the middle 60s, and a large potential search area. On the afternoon of August 27, 2003, after extensive investigative work, a creative "back drift" using Joint Automated Work Sheets (JAWS), savvy analysis of potential distress scenarios, 2,269 square miles searched, and persistence in spite of exceeding cold exposure survival model (CESM) predictions, the two persons were rescued alive by an HH-65B from Air Station Traverse City.

Background. At 0600 on the morning of August 26, Vernon Uricek and John Young launched their 18' Sea Ray pleasure craft into Lake Huron at a public ramp in Rockport, Michigan. Young, the owner and operator of the boat, had told his wife that they would be salmon fishing on the lake for the morning about seven miles north and seven miles east of their launch point. They also said that they expected to return to the dock by 1330.

At approximately 1900, Mrs. Young called Coast Guard Group Sault Ste. Marie to report that her husband and Uricek had not returned from their fishing trip. The two were experienced boaters, and while they had occasionally extended a fishing outing, it was unlike them to be this late.

45-12.102N 083-23.682W
Rockport, MI

45-04.600N 083-06.490W
18' Bow Runner FOUND
PLOTATION DEVICE: 2 CUSHIONS- DEBRIS
45-04.100N 083-05.650W

Initial efforts. Group Sault Ste. Marie assumed SAR Mission Coordinator (SMC) duties, completed preliminary and extended communications searches, and confirmed that the boaters had not returned to their vehicle and trailer. The group also commenced urgent marine information broadcasts (UMIB). Elevating the level of apprehension was the fact that heavy thunderstorms had moved through the area around 0900 that day. Sustained winds had continued to increase all day, and by nightfall, 20-25 knot winds were generating 6-8' seas.

Initial search efforts by the group focused on the area north and east of Rockport, based on conversations with the next-of-kin. The group launched an HH-65B from Air Station Traverse City, a 47' MLB from Station St. Ignace (over 75 miles away), a 30' UTL from Auxiliary Operated Station Alpena, and requested a local sheriff's boat search as well. The Ninth District Command Center also requested that Group Detroit launch a 47' MLB from Station Tawas (over 60 miles away). These searches were conducted all night, and produced no sightings.

45-01.644N 083-04.100W
Ice Chest Found

44-58.880N 083-03.430W
DEBRIS FIELD FOUND 271820Z

Day two. Given the complexity, span and duration of the case, the Ninth District Command Center assumed SMC at 0800 on August 27, and directed further questioning of the next-of-kin and marine facility operators up and down the coast, trying to discern the most likely position of Young and Uricek. SMC also requested a C-130 from LANTAREA to provide additional search coverage and endurance. UMIBs had produced no results, primarily since the heavy weather had kept most other recreational boaters off the water. Physical and communications checks of all marinas and shoreside facilities in the entire region had also produced nothing. The controllers also checked with commercial traffic heading through the area, and none had seen any vessels meeting the description.

continued on following page

Vessel then debris located, but no people. SMC directed additional searches, and expanded the search area south, based on lake surface current information from a datum marker buoy and NOAA surface current models. At 0820, a commercial tug and barge unit located what appeared to be a capsized pleasure craft, substantially south and somewhat east of the initially assumed datum. Station Alpena's 30' UTL quickly arrived on scene, and confirmed the capsized boat to be the missing 18' Sea Ray. No persons, and no personal floatation devices (PFDs) were located. Then at 1058, the C-130 located some potentially related debris several miles away.

Station Alpena's 30' UTL left the scene to pick up a local dive team from shore and transited back to the scene, but upon arrival, could not relocate the boat. Additional other debris was now visible, and the vessel was presumed sunk. Search efforts continued to be concentrated in the area of the debris, which was south of the initial search area.

Predicted survival time expiring. At approximately 1400, suggestions for suspension based on the expected survival time reached SMC. Locals were asking whether the next-of-kin should be prepared for an unsuccessful outcome. Surface water temperatures throughout the search area ranged from 65 to 68 degrees, yielding predicted survival times ranging from 17 to 24 hours. The Ninth District Command Center was not in favor of suspension, mainly because no PFDs (which were confirmed to have been on board) had been located among all of the debris found. SMC made the decision to continue the search through the evening.

"Back drift" and reevaluation of scenarios. While SRUs were searching the area surrounding the debris field, SMC began to reevaluate possible scenarios and revisit any assumptions made earlier. SMC also conducted a "back drift" using Joint Automated Work Sheets (JAWS), based on the location of the capsized hull and wind and current values that were intentionally reversed by 180 degrees. The reversed drift suggested that the boat may have drifted from an area near Middle Island, a small uninhabited island off the east coast of Michigan. SMC examined the scenario

that perhaps Young and Uricek had become distressed near Middle Island, and attempted to swim for the island or a nearby buoy marking the wreck of the S.S. NORDMEER. The area had actually been searched the night before, but the search target at that time was an 18' boat, and the probability of detection for an unlit person in the water was negligible. Based on this information, SMC decided to research previously covered area in daylight with a new search target of a PIW.

Survivors successfully located. SMC directed an on scene HH-65B to conduct a new parallel search along the shoreline near the island, as well as the island itself. On one of the last legs of the helicopter's search pattern, the crew reported locating one person in the water several miles from Middle Island, at 1614. The crew recovered Young alive but suffering from severe hypothermia (he had been in the water a remarkable 31 hours). Based on information passed by the survivor, the helicopter proceeded directly to Middle Island, and located Uricek on the beach at 1620. with a large "S. O. S." spelled out in the sand. Both survivors were taken to a local medical facility. Uricek was released shortly

thereafter in good condition, while Young was admitted for three days of treatment and recuperation.

Survivor debrief. Debrief of Young and Uricek yielded their story of distress and survival. Upon launching their boat at Rockport, Michigan, they proceeded south with intentions to fish near Middle Island, rather than heading north and east of Rockport. They had weathered one thunderstorm early on the morning of August 26 by beaching their boat on Middle Island. After that storm had passed, they launched again and proceeded several miles east of Middle Island, with seas steadily growing. At approximately 0900, their boat was hit by what Young described as a "one-two punch of rogue waves" that swamped their boat. Shortly thereafter, the boat sank to the waterline, then capsized. Young and Uricek became entangled in fishing gear and ski ropes, but eventually freed themselves.

At approximately 1000, Young and Uricek decided that it would be a while before someone started looking for them, and began swimming for Middle Island, which they estimated was about three miles away. They swam as a pair for some time,



Mr. John Young, one of two survivors, was in the water for a remarkable 31 hours before being rescued. With him is Rescue Swimmer, AST3 Shaun Legas from Coast Guard Air Station Traverse City, who helped recover Mr. Young, U.S. Coast Guard Photo

then realized that Uricek was a much stronger swimmer than Young, so Uricek struck out ahead to see if he could get help for both of them. Young's swimming was making little headway into the one-knot current in the area, and was also being battered by six- to eight-foot waves, with an occasional 10' wave. Uricek, on the other hand, swam all day and night, reaching the beach at Middle Island at an estimated 0330 on August 27. Extremely fatigued, Uricek broke into an unoccupied cottage and gained some comfort from food and a cot he found there. Young, conversely, ate a number of water insects and seaweed for energy.

Young reported that a Coast Guard helicopter flew within sight at least once during the night, but the crew could not see him even with night vision goggles. He was wearing a dark blue PFD, and had no source of illumination. Young decided at that point that it was up to him to rescue himself, and renewed his determination to reach shore. As Young quoted later, "without the PFD, determination alone wouldn't have saved me, and without determination, the PFD alone wouldn't have saved me."

In Summary. The reevaluation of possible distress/survival scenarios, the researching of previously covered areas under new circumstances, and the JAWS "back drift" were the most significant factors in the successful result of the search. As stated in the case summary, while SRUs were searching the area surrounding the debris field, SMC began to reevaluate possible scenarios and revisit any assumptions made earlier. SMC also conducted a "back drift" using Joint Automated Work Sheets (JAWS), based on the location of the capsized hull and wind and current values that were reversed by 180 degrees. The reversed drift suggested that the boat may have drifted from an area near Middle Island, a small uninhabited island off the east coast of Michigan. SMC examined the scenario that perhaps Young and Uricek had become distressed near Middle Island, and had attempted to swim for the island or a nearby buoy marking the wreck of the S.S. NORDMEER. The area had actually been searched the night before, but the search target at that time was a 18' boat, and the probability of detection for an unlit person in the water was negligible. Based on this information, SMC decided to research previously covered area in daylight with a new search target of a PIW.

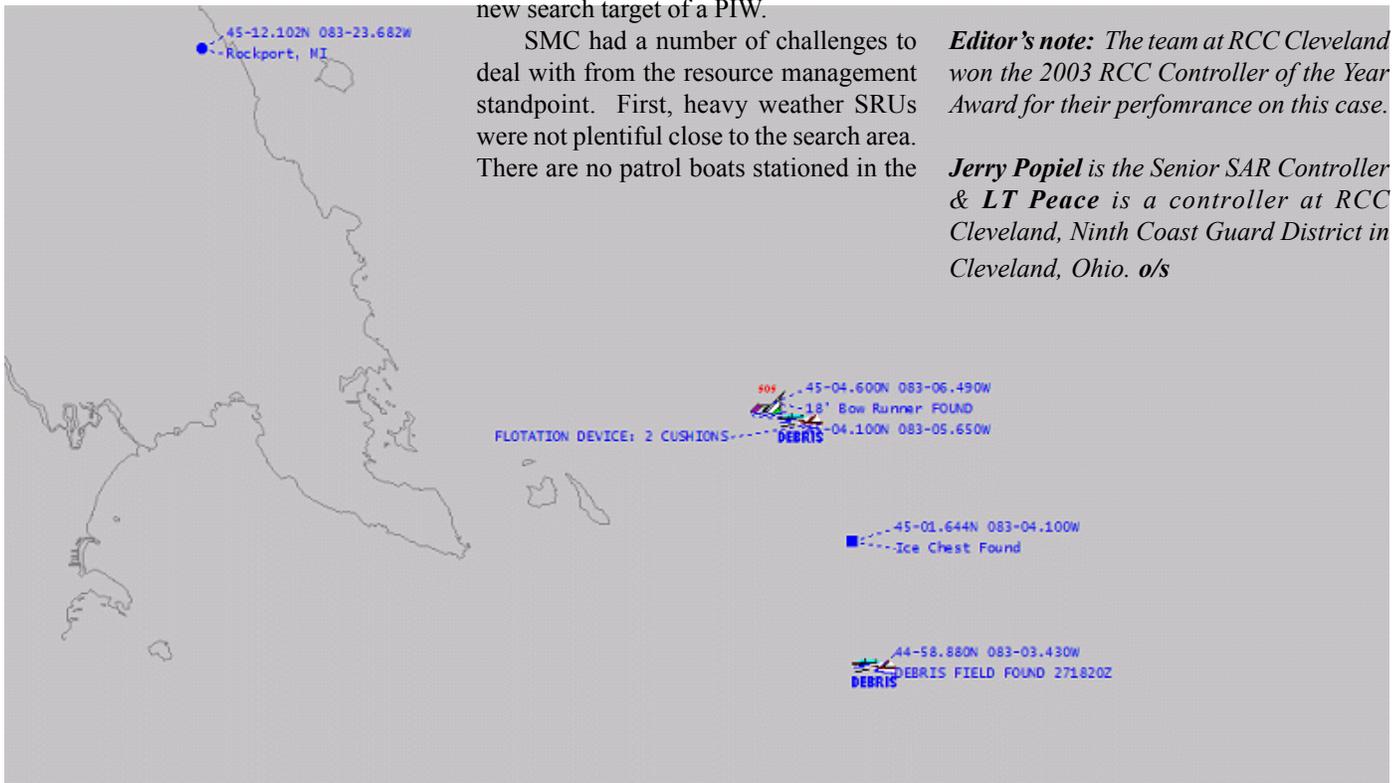
SMC had a number of challenges to deal with from the resource management standpoint. First, heavy weather SRUs were not plentiful close to the search area. There are no patrol boats stationed in the

Ninth District, and there was no icebreaker or aids-to- navigation cutter presence on Lake Huron at the time (nor any required). 47' MLBs had to transit substantial distances from neighboring Stations St. Ignace and Tawas. Two HH-65B helicopters from Air Station Traverse City were used, with crews and airframes rotated as necessary to keep constant presence in the search areas. SMC also used the availability of a LANTAREA C-130 to provide longer endurance. Auxiliary-Operated Station Alpena's 30' UTL also participated in the case, despite weather conditions being on the fringes of the boat's limitations.

This case had all the elements of a classic, difficult-to-solve overdue case: a. uncertain datum; b. uncertain time of distress; c. uncertain nature of distress; d. uncertain search target; and e. large potential search area. Additionally, SMC had further challenges of: f. inclement weather (surface SRUs reported six- to eight-foot seas during most of the search); g. estimated survival time running out; and h. limited heavy weather surface resources. By careful analysis of the case, astute planning, and sheer persistence, the SAR planners were able to direct resources to the scene of the rescue in time to find both missing people alive.

Editor's note: The team at RCC Cleveland won the 2003 RCC Controller of the Year Award for their performance on this case.

Jerry Popiel is the Senior SAR Controller & **LT Peace** is a controller at RCC Cleveland, Ninth Coast Guard District in Cleveland, Ohio. o/s



United States - Mexico Border SAR Success Through Close Coordination

By LT Tim Dealy and LT Jasmine Yeoman

With the warm summer months quickly approaching, the U.S. Coast Guard District Eleven Command Center (D11) and the Mexican Naval Command Center (MEXNAV) anticipate another busy Search and Rescue (SAR) summer season. The ocean waters along California and Mexico's Baja Peninsula are a popular travel route for recreational boaters and commercial cruise ships. The open communications and close cooperation between MEXNAV and D11 have enabled both countries to respond quickly and successfully to numerous SAR cases saving both U.S. and Mexican citizens. The heavy marine traffic along this international route makes it vital that D11 and the MEXNAV have a cohesive working relationship so people in distress get the help they need with minimum delay. The 2004 season started early with a significant case which involved extensive communication and coordination between D11 and the MEXNAV.

The case began on April 19th 2004 when the United States Border Patrol contacted Activities San Diego to request Coast Guard assistance in finding three missing swimmers in the ocean near the U.S./Mexican border. The missing swimmers were Mexican nationals (four men and one woman) attempting to cross the border from Mexico to the United States by swimming several miles in the Pacific Ocean. Fortunately, two of the swimmers had already made it safely to Border Field State Park where they were taken into custody of the U.S. Border Patrol.

Immediately, Activities San Diego set about coordinating a response by issuing an Urgent Marine Information Broadcast (UMIB) and launching an Air Station San Diego HH-60 helicopter and a Station San Diego 25-foot RB-HS. Activities San Diego also requested resource support from local agencies to increase the number of on scene units. The U.S. Border Patrol dispatched their own boat to assist and it arrived on scene and recovered a third male swimmer. The man was transferred to harbor police to be taken to a local hospital for examination. That left two swimmers still missing.

Upon notification from Activities San Diego, D11 used Coast Guard Spanish interpreters to contact the MEXNAV to brief them on the situation and request additional assets to assist in locating the two remaining swimmers within Mexican waters. The MEXNAV quickly launched a patrol boat and helicopter to search the Mexican area of responsibility. D11 and the MEXNAV worked closely together to create search patterns for the two remaining people. Once on scene, the two helicopters were able to communicate with each other and adjust the search patterns and search altitudes for more efficient, safer searches.

Within three minutes of arriving on scene, the Station San Diego RB-HS located the fourth swimmer unconscious and severely hypothermic. The Coast Guard helicopter hoisted the victim, transported him to UCSD Medical Center in critical condition, and returned to the scene to finish its assigned search pattern. Sadly, a

short time later, the San Diego County Coroner reported that the victim was deceased.

D11 and the MEXNAV continued to coordinate the utilization of the multiple assets on scene searching for the female swimmer who remained missing. The MEXNAV also worked with local U.S. Law Enforcement to identify the five involved subjects. Activities San Diego launched the CGC HADDOCK to relieve the RB-HS as the primary Coast Guard surface asset. The Coast Guard helicopter finished its final search pattern before returning to the air station while CGC HADDOCK remained on scene actively searching for the final swimmer until sunset. At sunset, D11 suspended its search. The MEXNAV continued its search the following day, but did not locate the final swimmer.

Despite having lost the fifth swimmer, the quick coordination by the United States and Mexico made it possible for these neighboring countries to search the largest area possible and in the end recover two people from the water and save the life of one. This case was a great example of the strong SAR working relationship between the United States and Mexico that better serves the publics of both nations.

LT Yeoman is a controller at RCC Alameda, Pacific Area/Eleventh District, Alameda, California. LT Dealy is the Operations Officer at Group Seattle, Washington and previously a controller at RCC Alameda. o/s

F/V CATHAN

Professionalism, Communication, and the Will to Survive

By CWO3 Arnie LeCompte and Don Knesbeck

Many of us joined the Coast Guard because of a desire to help others. Whether as boatcrew, aircrew, or a planner – coordinating search efforts, nothing we do provides quite the sense of pride as saving a life. Such is the case surrounding the F/V CATHAN.

At 1330 local on 29 Feb 04, Station Yaquina Bay, on the central Oregon coast received a call from a person walking on the beach reporting a fishing vessel aground and breaking up in the surf just south of the Yaquina Bay south jetty. An HH-65 on patrol from AIRFAC Newport quickly identified the stricken boat as the 45-ft F/V CATHAN. Nobody appeared to be aboard the vessel and the engines were still engaged. Air Station North Bend and Station Yaquina Bay immediately launched rescue resources attempting to locate the unknown number of people on board.

PROFFESIONALISM

The SAR Mission Coordinator (SMC) during this case was Group North Bend. Initial reports provided no information regarding the number or situation of person(s) on board. Search assets included two 47' MLBs and a beach rescue unit from Station Yaquina Bay and CG-6515 from AIRFAC Newport. Initial search efforts focused on the surf and shoreline area in the vicinity of the grounded vessel. Information regarding the CATHAN developed rapidly and the SMC quickly modified search efforts based on information received. Approximately one hour into the case we learned the F/V CATHAN had been crabbing along the 18-20 fathom curve (about two miles off shore). An MLB and CG-6515 began parallel

search efforts based on the fathom curve while the second MLB and beach rescue unit continued searching the surf and shoreline area. A local vessel then reported seeing the CATHAN near Alsea Bay (about eleven miles south) only three and a half-hours earlier. Again, the search area was modified to concentrate efforts between the Last Know Position (Alsea Bay) and the vessels present position. With only a few daylight hours remaining and knowing the short survivability time in 50-degree water, the SMC launched a second aircraft from Air Station North Bend to assist with search efforts. At 1604 Scott Morales was located clinging to a crab pot buoy in 20 fathoms of water about half way between Newport and Alsea Bay. He confirmed being the only person aboard the vessel. Total search efforts lasted only two and a half hours as the SMC expertly managed five SAR resources continually modifying efforts as information was received. The result...one life saved.

COMMUNICATION:

As search efforts commenced, Group North Bend, Station Yaquina Bay, and District 13 hit the investigative trail searching for any clues that might indicate how many people were aboard the F/V CATHAN. This investigative journey proved to be filled with hurdles. The following are just a few of the obstacles we worked through:

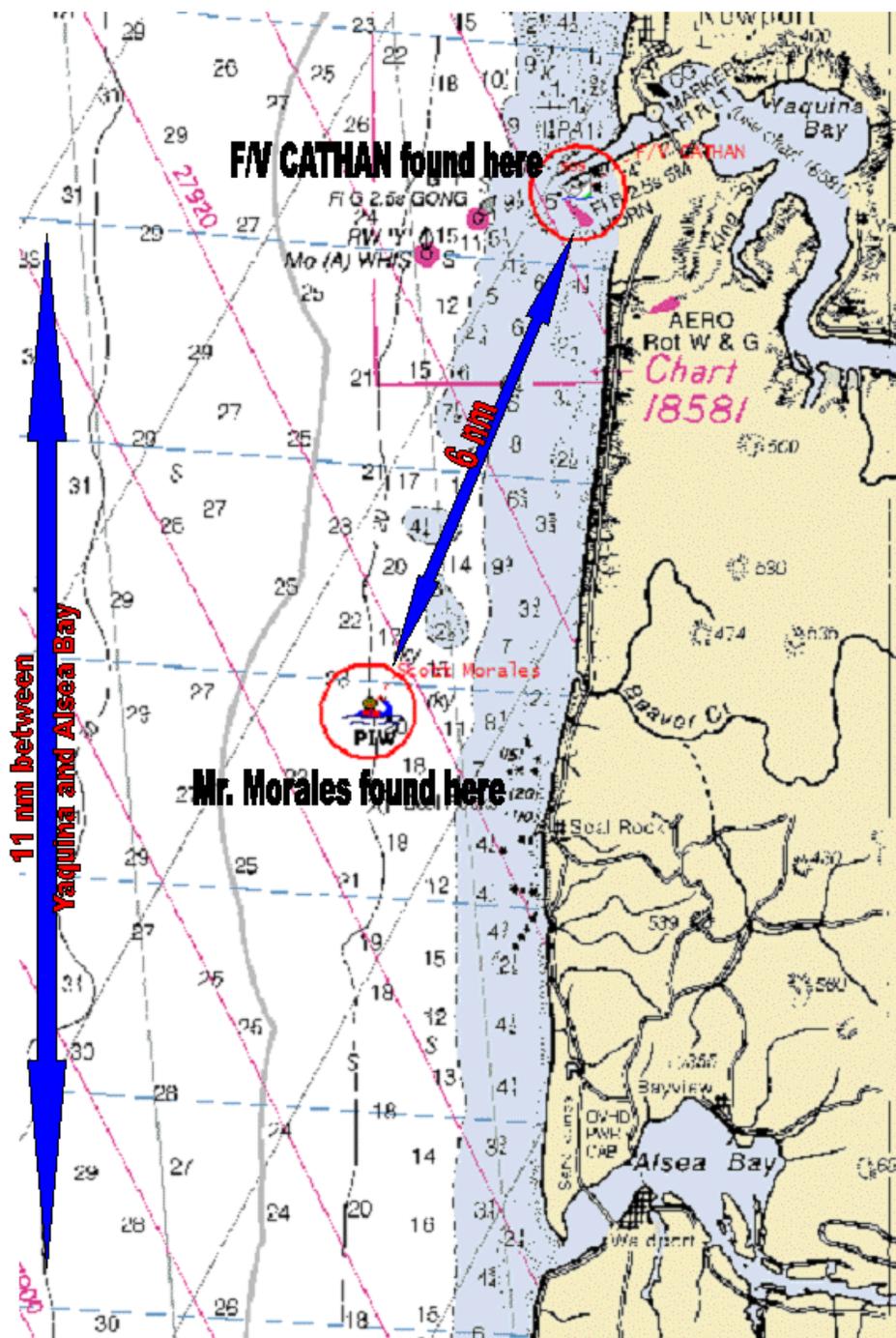
- The phone of the registered owner had been disconnected.
- After several dead-end attempts D13 finally reached a person

familiar with the F/V CATHAN and learned the vessel had been sold over three years earlier and none of the registration information was updated or accurate.

- Through another series of phone conversations we discovered the CATHAN used to be called the POLARIS.
- By placing calls to marinas throughout the area we learned the POLARIS operated out of a marina in Portland, OR. USMCC was able to provide additional contact information on the POLARIS.
- Finally, D13 located the registered owner of the POLARIS (in Idaho). The owner reported his vessel, the CATHAN, was in the process of being sold to Todd Rogers who lives in Newport, OR.
- Todd Rogers reported he had loaned the CATHAN to a friend, Scott Morales.
- We were finally able to coordinate with local authorities who queried neighbors of Scott Morales and confirmed he was going crabbing alone, and had gotten U/W on the CATHAN that morning.

Though we were finally able to confirm there was only one person on board, it was

continued on following page



Chartlet showing the F/V CATHAN case locations

Mr. Morales was rescued by CG-6515 six hours later. Mr. Morales had stripped of his outer garments because he felt the weight of the clothing was dragging him under. The Cold Exposure Survivability Model (CESM) indicated a functional time of 5.7 hours and survivability time of 9 hours. Scott Morales' is 6 ft 6 inches tall and weights 310 pounds. His size and weight certainly worked to his advantage in this situation. However, had he not thought to hang onto the crab pot buoys or attempted to swim for shore (2 miles away), he likely would not have survived. After Mr. Morales' rescue he was treated for mild hypothermia at a local hospital and later released in good condition.

Throughout this case several critical elements came together and resulted in a positive outcome. Group North Bend expertly managed the case, rapidly modifying search efforts based on information received. Extensive communications between the SMC, D13, Station Yaquina Bay, and resources within the local community directed search efforts in the right direction. Finally, Scott Morales ability to keep his composure in these dire circumstances is an excellent example of the human spirit and will to survive.

CWO3 Arnie LeCompte and Don Knesbeck are controllers at RCC Seattle, Thirteenth District in Seattle, Washington. o/s

Station Yaquina Bay's communication with the local community that provided the most valuable information. It was through this communication we learned the CATHAN was crabbing along the 18-20 fathom line and the vessel was actually seen near Aisea Bay (11 miles south) just three and a half hours earlier. These clues directed search efforts to the south and were significant in Mr. Morales' rescue.

THE WILL TO SURVIVE:

An element that cannot be overshadowed is Scott Morales' will to survive. At about 1000 Mr. Morales was arranging crab pots on the aft deck as the F/V CATHAN traveled on a northerly heading. He later reported an unexpected swell had shifted the pots and pushed him over the side into the 50-degree water. Clothed only in under garments and clinging to crab pot buoys in 6-foot seas,

Hawaiian SAR

Two Case Summeries from the 14th Coast Guard District

The following two summaries of instructive cases were submitted by JRCC Honolulu for this edition of "On Scene"

392-04: 406MHZ UNLOCATED ALERT FOR S/V PARAGON (US)

SMC: D14 CC

UNITS: D14 CC, SECTOR CENTRAL PACIFIC, USN HELO, MAUI FIRE DEPARTMENT HELO, F/V KEKAHI (US)

MISLE: 166172

SITUATION: At 090015Z D14 CC received the unlocated alert. The vessel was on a trip from Manele Bay, Lanai to Lahaina Harbor, Maui on a two-hour charter. A vessel responded and stated they sighted the vessel sailing about the time of the alert. USN Helo launched to locate and D14 CC also launched a Maui Fire Department Helo due to a shorter flight time. Once on scene, the Maui FD Helo located the vessel capsized with all ten passengers and crew clinging to the hull. The Maui FD Helo diverted the nearby F/V KEKAHI and they rescued the persons and safely delivered them to Manele Harbor. EMS met the survivors and they treated them for minor injuries. No serious injuries were reported. Post SAR investigation pending. **CASE CLOSED**

This case was tricky for the command center. All Coast Guard aircraft were unavailable due to a fuel truck contamination problem. The SAR controllers were creative and aggressive in prosecuting the 406 Solution, while not knowing that the vessel was capsized in high winds and seas. It also turns out that a California Police Officer risked his life getting the other 9 people to swim out from under the overturned vessel. An award is pending and this case created national media interest.

468-04: DOWNED A/C - PIPER N8198A W/3POB IVO MILOLII, BIG ISL

SMC: D14 CC

UNITS: D14 CC, BPAS, HAWAII CO F/R

MISLE: 170991

SITUATION: At 181740W D14CC received initial request for support from Kona Fire Rescue. The pilot of an ISLAND HOPPER Piper A/C called F/R via cell phone to report she had crashed in a lava field in the vicinity of Milolii and her two passengers were badly burned. F/R could not locate the crash site. D14 CC launched HH65 and C130 from BPAS. At 182109W the HH65 located the crash site in extremely poor search conditions. The rescue swimmer was deployed and extracted one victim from the wreckage. Two burn victims were then hoisted and transferred to F/R at Kona Airport. The HH65 refueled and returned to the scene to hoist the rescue swimmer and 3rd subject who was also badly burned. The 3rd subject was transferred to F/R at Kona Airport. As of 190700W the first 2 subjects were in listed critical condition. One has been transferred to Queens Hospital on Oahu and the 2nd is scheduled to be transferred to Queens. The 3rd subject (pilot) was listed in serious but stable condition at Kona Community Hospital, Big Island. **CASE CLOSED**

The Coast Guard is responsible for terrestrial SAR involving aircraft in Hawaii and Guam. This case forced controllers to use as many resources as possible to find the downed plane. A cell phone call from the survivors, calls to residents in the area and coordination of Coast Guard and State SRU's located them in time to save their lives. The difficulty of the search was impeded by the vast and difficult area of the search. The case also sparked interest in the E-911 GPS locating technology at the state government level.

Aircraft Ditches Into the Icy Waters of Alaska

By LT Stacie L. Fain

Alaska suffered 117 aircraft crashes during the 2003 calendar year, resulting in 29 fatalities. The D17 Command Center prosecuted 10 cases involving aircraft during the year, but one stood out among all the rest. It may have been because many felt the pilot made some poor decisions or because two people survived this crash. Or, it may have been because a small community of Alaskans worked closely with the Federal Aviation Administration (FAA) and the Coast Guard to rescue the survivors. Whatever the reason, here is what happened on the evening of July 13, 2003.

At approximately 1715 Alaska daylight time N6296Q, a twin engine Cessna 402, departed Port Angeles, Washington, to continue on a journey from Bountiful, Utah to Gustavus, Alaska. The pilot, Gary Ostler, his son Christopher, Ben Gunn, Khyl Shumway, Gordon Moses, and his son Adam Moses were traveling to Gustavus to meet other family members at Glacier Bay National Park. The pilot filed a flight plan to stop for fuel in Ketchikan. While enroute Ketchikan, the pilot amended his flight plan to stop for fuel in Petersburg instead of Ketchikan. As he neared Petersburg, he changed his plans again and notified Air Route Traffic Control Center (ARTCC) that he was going to proceed on to Gustavus. At 2113, while operating in instrument meteorological conditions (IMC), the pilot radioed that he was concerned about his fuel state. According to ARTCC, the aircraft was 22 miles southeast of Gustavus Airport. ARTCC explained that there was another airport in the village of Hoonah that was closer to the pilot's position. Since the pilot was unfamiliar with the airport he elected to continue to Gustavus. At 2127, the pilot reported that the airplane was out of gas in both engines and ditched into Icy Strait shortly thereafter.

At 2132 Coast Guard Rescue Coordination Center (RCC) Juneau received a call from the Juneau Flight Service Station (FSS) reporting that a twin engine Cessna had run out of fuel and that the engines had stopped over Icy Strait. The RCC immediately issued an Urgent Marine Information Broadcast (UMIB) and launched an HH-60J helicopter from Air Station Sitka. The Coast Guard controllers talked with their small boat station, Station Juneau, who was

just finishing up another case. It was outside their normal area of operations, but they wanted to help. The RCC controllers spoke with the Hoonah Harbormaster to see if he could launch any assets. The controllers also spoke to the Rangers at Glacier Bay National Park, who dispatched a vessel to the area to assist in the search. The town of Gustavus established an Incident Command and three civilian aircraft began searching the area. The Coast Guard helicopter, CG6006, arrived on scene and immediately dropped a Datum Marker Buoy (DMB) enabling the RCC to gather valuable drift information. Working with the FSS and the drift data, the controllers were able to narrow the search to a small area. CG6006 eventually asked the civilian aircraft to land due to poor weather conditions and the hazards associated with operating multiple aircraft in a small search area. The Hoonah Police Department and the Alaska State Troopers volunteered their assistance. Numerous Good Samaritan

vessels arrived in the area and began searching. At approximately 2300 Alaska daylight time, the F/V Kelley Bay located two survivors near Eagle Point. The vessel radioed for the Coast Guard helicopter to recover the two. The survivors were wet, cold and in the early stages of hypothermia. One survivor had a broken leg, the other was uninjured. They were transported by helicopter to awaiting emergency medical services in Juneau. The search continued.

The following day the FAA conducted an interview with the two survivors, Ben Gunn and Khyl Shumway. They reported that when the airplane impacted the water all the occupants lost consciousness mo-



Enroute to Gustavus, Alaska from it's last fueling in Port Angeles, Washington, the Cessna 402 bypassed two potential fueling stops in Ketchikan and Petersburg and proceeded on towards it's destination. When the fuel state became more urgent, the pilot again elected not to stop at Hoonah offered by the ARTCC, subsequently running out of fuel and ditching into Icy Strait near Eagle Point, where two survivors were later recovered. Base map from USGS "Terra Server" on-line.

mentarily. They also reported that four occupants were able to exit the airplane, including the pilot, but only the two of them made it to shore, which was about one mile away. The search effort was suspended on the evening of the following day. The plane, pilot and remaining passengers were not recovered.

This airplane accident, like numerous boating accidents, was a fresh reminder to the search and rescue community that sometimes people make poor decisions and as a result they get into serious trouble very quickly. It is up to the Coast Guard RCC controllers to gather the information rapidly and launch the right resources to

the right search area. In this case, the Coast Guard did an exemplary job gathering information from a variety of sources and narrowing the search area early in the rescue effort. In addition, the coordination between the RCC controllers, USCG search assets, and local volunteers was unmatched. It is human nature for Alaskans to look out for one another; it comes naturally and is a necessity for those surviving in the "Last Frontier." RCC Juneau controllers rely heavily on volunteers to help cover the over 33,000 miles of coastline in their vast area of responsibility. They also rely on the vast amount of local area knowledge that the volunteers have to offer. As

a result of the teamwork displayed in this case, two fortunate survivors were able to go home to their loved ones in Utah. Unfortunately, many aircraft passengers don't survive airplane crashes in Alaska, especially those that ditch into the State's icy waters.

LT Fain is a controller at RCC Juneau, Seventeenth Coast Guard District, Juneau, Alaska. o/s

SEARCH AND RESCUE AWARDS

The Rescue Coordination Center Controller and Group SAR Controller of the year awards are awarded annually to Coast Guard SAR planners that demonstrated the highest caliber of search and rescue expertise in the areas of investigation, search planning and search coordination. Selections are made based on performance during a single case with emphasis on: investigation and planning efforts, resource management, difficulties encountered and surmounted, and results of search planning efforts.

RCC CONTROLLER OF THE YEAR

2003

COAST GUARD NINTH DISTRICT CLEVELAND

Mr. Jerome Popiel, LT Eric Peace, LTJG Christopher Pasciuto, OS1 William Stanifer, and OS1 William Turenchalk are commended for their in-depth investigative work and exceptional use of search assets and resources in planning the search for two persons overdue from a fishing trip. On the morning of August 26th, 2003 the two persons departed a Rockport, Michigan fishing ramp aboard an 18-foot boat to fish on Lake Huron. The fisherman had told family members that they expected to return at 1300 that day, and that they intended to fish to the north of the launch site. They instead proceeded, however, to the south to a different fishing site. Weather conditions included 20-25 knot winds, six to eight foot waves, and thunderstorms. At approximately 0900, the boat was struck by “rogue waves” which swamped and capsized the boat, placing the individuals into the water. About an hour later one of the individuals, wearing a floatation device, began to swim towards a small, uninhabited island, three miles away, while the other remained with the capsized boat and debris.

Later that evening, Coast Guard Group Sault Ste. Marie received the report of the overdue and assumed SAR Mission Coordinator. A search was initiated which included communications checks, a helicopter from Air Station Traverse City, and small boats from Station St. Ignace, Station Tawas and Station Alpena. The search was conducted throughout the night without success. The next morning, due to the complexity of the case, RCC Cleveland assumed SAR Mission Coordinator. With limited information by which to determine where and when the vessel may have encountered problems, RCC Cleveland was faced with a large search area. Poor on-scene weather conditions hampered the search being conducted by on scene assets, and low air and water temperatures reduced survival time for persons in the water adding further urgency to the case. An aircraft from Air Station Elizabeth City participating in the search then located multiple debris fields, but neither of the missing men. Armed with new information, the RCC personnel used the Joint Automated Work Sheets to conduct a “back-drift” from the debris, and revised the search plan. During the revised search a Coast Guard helicopter located one of the missing persons in the water alive, but severely hypothermic, and the second person on a nearby island. The distressed fisherman was located on August 27th, at 1614, after being in the water for approximately 31 hours.

By using superb search planning skills, expertly managing multiple search assets, fully examining facts, and by skillfully using computer search tools, RCC Cleveland personnel successfully located the fisherman before they succumbed to hypothermia and prevented loss of life. The dedication and professionalism of all members of the RCC Cleveland are in keeping with the highest traditions of the U.S. Coast Guard.

JEFFERY J. HATHAWAY

Rear Admiral, U.S. Coast Guard
Director of Operations Policy

SEARCH AND RESCUE AWARDS

GROUP CONTROLLER OF THE YEAR

2003

COAST GUARD GROUP SAULT STE. MARIE

Coast Guard Group Sault Ste. Marie Search and Rescue Controllers OS1 James Barber and BM2 Jason Chapman are recognized for their detailed investigative work, judicious management of multiple search assets, and expert use of computer search tools, which led to the rescue of a 14-year-old boy adrift in a small skiff on Lake Superior.

On August 21st, 2003 Group Sault Ste. Marie received a call from the Alger County Sheriff's Department reporting a 14-foot skiff adrift in the vicinity of Grand Island, Munising, Michigan, with one male teenager aboard. The report stated that two boys had been playing with the skiff along the shoreline, when it was taken offshore by strong winds and currents with one of the boys still aboard. The skiff had no means of propulsion, and the boy was minimally dressed with only a short sleeve shirt and pants. He was also without a personal flotation device, survival or signaling equipment. Upon receipt of the report, the Group Controller requested the launch of a helicopter from Air Station Traverse City and dispatched a small boat from Station Marquette. With the winds in the area increasing to over 20 knots, one to three foot seas, a 68 degree air temperature and water temperature at 42 degrees, hypothermia was a concern. To facilitate the search, the Group Controller coordinated local police units in conducting shoreline searches and used the Joint Automated Worksheet System (JAWS/C2PC) tool to develop search plans for surface and air units arriving on scene. The Group controller also directed a datum marker buoy be deployed to obtain updated drift information. With the new information, the Group Search and Rescue Controllers then quickly assessed the need to rapidly cover a larger search area and requested a Canadian C-130 search aircraft. After re-examining currents, and on-scene winds in the area, they determined there was a significant chance the skiff had drifted further to the north and east than indicated by (JAWS/C2PC). With this knowledge the controllers directed a new search to the north and east where the C-130 aircraft then spotted the skiff, which had by then drifted over 20 nautical miles in just 10 hours. Search planners then diverted the Coast Guard helicopter to the scene, which hoisted the boy and transported him to emergency medical facilities where he was treated for hypothermia.

Demonstrating superb search planning skills, OS1 James Barber and BM2 Jason Chapman located the skiff with boy aboard before he succumbed to hypothermia and prevented loss of life. The dedication and professionalism of these Coast Guard Group Sault Ste. Marie Search and Rescue Controllers are in keeping with the highest traditions of the U.S. Coast Guard.

JEFFERY J. HATHAWAY
Rear Admiral, U.S. Coast Guard
Director of Operations Policy

CONFERENCES - WORKSHOPS - EVENTS



SAR SCENE 2004
CALGARY, ALBERTA OCTOBER 13-16TH
You won't want to miss this adventure in the Wild, Wild WEST!

come for the pre-workshops
stay for the western hospitality

SEARCH AND RESCUE ASSOCIATION OF ALBERTA
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National Search and Rescue Secretariat / Secrétariat national recherche et sauvetage



The 13th annual search and rescue workshop will be held in Calgary, Alberta, October 13-16, 2004. It includes four days of presentations, demonstrations, a tradeshow, SAR games, training sessions and an awards banquet. Co-hosted by the National Search and Rescue Secretariat and the Search and Rescue Association of Alberta, SARSCENE 2004 kicks off on October 13 with the eighth annual SARSCENE games and demonstrations.

The workshop is a unique opportunity for SAR personnel to share their expertise and ideas, and over 600 participants from air, land and marine organizations across Canada, and around the world, are expected to attend.

New this year will be presentations highlighting search and rescue in the West; combined games and demonstrations in one day; all presentation rooms close to the tradeshow; and a fundraising showcase to highlight best practices.

Don't miss the early registration deadline of August 31, 2004.

For more information, visit the website at www.nss.gc.ca, or call 1-800-727-9414, fax (613)996-3746 or e-mail at sarscene2004@nss.gc.ca



SAR05

May 25 - 28 2005
Oakland Marriott City Center
Oakland, California



The National Association for Search and Rescue's Annual Conference is scheduled for May 25 - 28, 2005 in Oakland, California.

The conference will include classroom and hands-on workshops, exhibition, demonstrations and more!

For more information, visit NASAR's website at www.nasar.org, or call toll free 1-888-893-7788, (703)222-6277, fax (703)222-6283 or e-mail at conference@nasar.org

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U. S. COAST GUARD SAR PROGRAM INFORMATION

ON THE WEB

The SAR Watch - Office of Search and Rescue Newsletter (monthly)

The 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.

The SAR Watch is accessible via the SAR home page via a link on the left side navigation bar.

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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April 22, 2004

COAST GUARD CUTTER AND RESCUE BOAT ASSIST DISABLED NEW BEDFORD FISHING VESSEL

BOSTON — The Coast Guard Cutter Campbell, a 270-foot medium endurance cutter homeported at the Portsmouth Naval Shipyard in Kittery, Maine, came to the aid of the fishing vessel Triunfo at 7 a.m. Wednesday 120 miles east of Chatham, Mass., after the Triunfo's propeller became fouled with a net, leaving the vessel adrift with no means of propulsion.

The Campbell transferred the Triunfo to a rescue boat from Coast Guard Station Brant Point in Nantucket, Mass., at 8:45 a.m. today for further towing of the vessel and its four-man crew to the Juliet mooring anchorage two miles offshore in Nantucket. They are currently en route and expected to arrive at the mooring around 5:30 p.m. today.

The Triunfo, homeported in New Bedford, Mass., had been underway since April 16th fishing for Northeast multi-species fish and made the radio distress call to the Coast Guard at 9:35 p.m. Monday.

Last fall, the Campbell moved from its former homeport of New Bedford, Mass. to Kittery, Maine. Despite the relocation, the cutter has maintained an active presence on the George's Bank fishing grounds and continues to support the New Bedford fishing fleet.

