

Volume 1

January 2019

• Risk vs. Gain

Submitted by: David Larkin, DVC-RS Division Chief - Response Surface

The U.S. Coast Guard Auxiliary provides outstanding value-added service to the Coast Guard and the American people. In 2018 you and your shipmates have contributed over 2.8 million hours in support of the Coast Guard's statutory missions. Of those, just shy of 228 thousand hours were spent on surface operations missions. Those patrol mission hours work out to be the equivalent of 109 full time active duty members. If you figure an average 2nd class Petty Officers pay of about \$2500 (base pay) a month, that means that we save the taxpayers about \$272, 500 a month or \$3.27 million dollars just on manpower alone by getting underway. And those figures are just the crew. It does not consider the cost of the boats, fuel, maintenance, administration, mechanics, electricians, shore-side radio watchstanders, or command oversight costs to make those patrols possible. Most of the underway missions we conduct would have to be done by the active duty side if we were not there.

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TCT Bulletin

One of the elements of our new Risk Management program is the new "Introduction to Risk Management Course" (100202) located on AUXLMS. To access AUXLMS, please [click here](#), which will take you to <https://auxlearning.uscg.mil/>

While all auxiliarists can benefit from this course it is particularly important for everyone involved in Operations as well as members who are required to take TCT courses for other qualifications. This is a one- time training course to introduce the principles of Risk Management.



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Risk vs. Gain (continued)

The actual value we provide is incalculable. But those missions are not without risk. By the very nature of the mission sets, everything done in the Coast Guard has an included inherent risk. Why do we wear PPE, in some cases anti-exposure coveralls or dry suits when the public on the next boat is only wearing a PFD? Because we are trained and prepared to place ourselves in situations that increase our risk of injury. We train and plan and do everything we can to prevent that possibility, but the reality is that we are not sitting in a cabin enjoying lunch while the cruising to an entertainment destination. We are moving around on deck as lookouts, passing tow lines over the rail, inspecting PATONs, hoisting with helicopters, conducting man overboard drills and a wide range of other tasks. Each of those has a risk factor so we do what we can to mitigate that risk.

RISK ASSESSMENT MATRIX			PROBABILITY					
			Likelihood of Mishap if Hazard is Present					
			A Almost Certain (Continuously experienced)	B Likely (Will occur frequently)	C Possible (Will occur several times)	D Unlikely (Remotely possible but not probable)	E Rare (Improbable; but has occurred in the past)	
SEVERITY	Consequence if Mishap Occurs	Catastrophic (Death, Loss of Asset, Mission Capability or Unit Readiness)	I	1	1	1	2	3
		Critical (Permanent Disabling Injury or Damage, Significantly Degraded Mission Capability or Unit Readiness)	II	1	1	2	3	3
		Moderate (Non-Permanent Disabling Injury or Damage, Degraded Mission Capability or Unit Readiness)	III	2	2	3	4	4
		Negligible (Minimal Injury or Damage, Little or No Impact to Mission Capability or Unit Readiness)	IV	3	3	4	4	4
		Risk Assessment Codes (RAC)						
1=Extremely High 2=High 3=Medium 4=Low								

The new Risk Management Commandant Instruction and the accompanying changes to Team

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Please submit articles for Publication, via the chain of leadership and management, to the editor:
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Coordination Training (TCT) includes the new "GAR 2.0". Many of you have seen it and those that haven't will in the next few months as the training is rolled out. There are some minor changes and one big one to the way we have calculated and evaluated our risk prior to getting underway. The old method of giving a number, 1-10, to each category is gone. Now it is simply low, medium or high risk for each category. It's not a big change to the result, just different terms. What is new and now must be considered is the potential gain for the USCG in conducting the mission. Again, the levels are low, medium and high. Low level of gain is missions like passenger transport, non-critical logistical assignments, and public affairs demonstrations. Medium gain includes the saving of property, protecting the environment, and deterring illegal operations. High gain missions are

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urgent SAR and medevacs. You will now compare the risk level you came up with against the gain level you predict and decide if the mission is worth the risk. To help decide, there is a chart on the new GAR form that makes it clear when you launch and when you don't

We do not expect our general mission sets to change or to get cancelled on missions you have been doing. We do expect the risk vs. gain to be looked at and questioned **before and during every mission.**

Remember that the risks we accept are not only risks to ourselves or our boats. Our decisions put our crews at risk with the associated impact to their families and careers; it puts the Order Issuing Authority's (OIA) career at risk, the future of Auxiliary surface operations at risk, and the taxpayers of the United States at risk.

Please don't get the wrong impression, the risks we take are necessary and worth it as long as we always remember to measure the potential gain of the mission against the perceived risk. It is incumbent upon us as professional coxswains and crews to always evaluate the evolving risk vs. gain in our highly dynamic waterborne environment. Continue to talk amongst the crew while underway, always watch for potential issues, and do what you can to mitigate any emerging dangers.

Catch and mitigate the small problems before they become big ones.

Stay safe and have fun!

Across the Country— No Wires

Coast Guard Auxiliary National High Frequency (HF) Net Proof of Concept

**Submitted by: Dave Rockwell, Branch Chief
Response Telecommunications (BC-RTC)**



The big one just hit – Now what? It could be an earthquake, volcano, tornado, snowstorm, or hurricane. For a short while, all of Team Coast Guard in the affected area will be hunkered down. With sufficient warning, Team Coast Guard will secure our assets. The cutters will go to safe haven, the aircraft to a safe airfield, the response boats on trailers or safe harbors. We telecommunications operators will secure our radios, antennas, and paraphernalia in our evacuation locations.

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Across the Country --No Wires (continued)

After all, our motto is Semper Paratus (Always Ready). OK, the storm has passed, or the aftershocks have subsided. Very likely, during the first 8 to 96 hours, essential elements of our information infrastructure like cellphones, landlines, and the Internet may be disrupted. Coast Guard Communications Command and District contingency teams will move telecommunications response capabilities into the affected area as fast as possible. Sadly, there will be mariners caught by the event, needing Coast Guard assistance. Our Rescue 21 towers may be out of service. Stations may not be able to talk to Sectors. Sectors may have lost communication with their District. Districts might not be able to reach the Area headquarters. The telecommunications blackout may not last long, but it could severely disrupt coordinated response by the Coast Guard.

That's where we Auxiliary telecommunications operators can fill the gap. First, Auxiliary members have demonstrated the ability to supplement or temporarily replace Rescue 21 monitoring using fixed radio stations that survived the event, mobile communications facilities, and handheld transceivers. Within an hour, many Districts can activate and deploy Auxiliary Communications Units (ACUs as we call them) to provide between 5 and 15 nautical mile coverage off the coast. It is

not quite the 20 miles that Rescue 21 provides, but it is effective.

Many of our districts and divisions run local VHF (Very High Frequency) nets. Operators practice sending messages (what we call traffic) from one station to a group of stations. These nets can be activated in an emergency, assuming the stations are operational. This provides a vital link from stations to sectors when needed. To link the Sectors with USCG District headquarters, many of our districts have district or regional HF nets. These can be brought online quickly after an event - first to listen for any emergency traffic, and when needed, to pass messages from Sectors to Districts.

The missing link has been the ability to link the Coast Guard's Area and National headquarters with the Districts. The Coast Guard has satellite contingency communications sets that let them talk directly to higher echelon units. There are a limited number of satellite channels. These are shared with other government agencies. In many events, satellite communications can be saturated, and users experience delays getting the message out. Saving satellite for critical

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Across the Country --No Wires (continued)

messages helps, but the routine situation reports and administrative messages may have to wait.

Here's where the Auxiliary can give strong support to Coast Guard. Recognizing that very simple digital techniques used in the amateur radio community show promise for passing National-level traffic, W. H. "Bill" Scholz – Assistant District Staff Officer – Communications, District 11 South (ADSO-CM D11S (Flotilla 11-05) and Glenn Arrant (ADSO-CM D11S (Flotilla 11-05) recommended to National Staff, that we conduct a proof of concept for a National Radio Text (RTX) capability. National Staff reviewed the proposal, obtained permission from the Coast Guard leadership, and established a team of intrepid experimenters to prove the concept, analyze propagation, develop recommended procedures, and report back by the end of 2018.



The National Response, Telecommunications Division agreed with the plan, asking Bill Scholz to lead the effort from the West Coast. Mr. Scholz appointed Glenn Arrant as project lead and net

manager for the proposed National High Frequency (HF) Propagation Test. Mr. Arrant assembled a team of telecommunications operators (TCOs) with HF stations. Each of the selected stations could transmit on both voice and digital text. The test group included TCOs from Districts 1N, 5N, 7, 8ER, 11S, and 11N with a total of 19 operators participating. Preliminary voice tests among stations were unsuccessful, so Mr. Arrant and his team developed an automated radio text (RTX) propagation test, using software already in use by most Auxiliary districts. The team developed programming macros that would send broadcast text traffic every five minutes. The 19 stations participating in the test set their software to automatically receive and log the received messages. The team tested all the assigned Auxiliary HF frequencies over a 6-week period. Mr. Arrant's core team of analysts collected the logs for data reduction. The testing occurred between February and April 2018. The team analyzed and reduced the data. They published their preliminary report in July, just ahead of the 2018 Auxiliary National Convention (NACON) in Orlando. Preliminary results were shared with the

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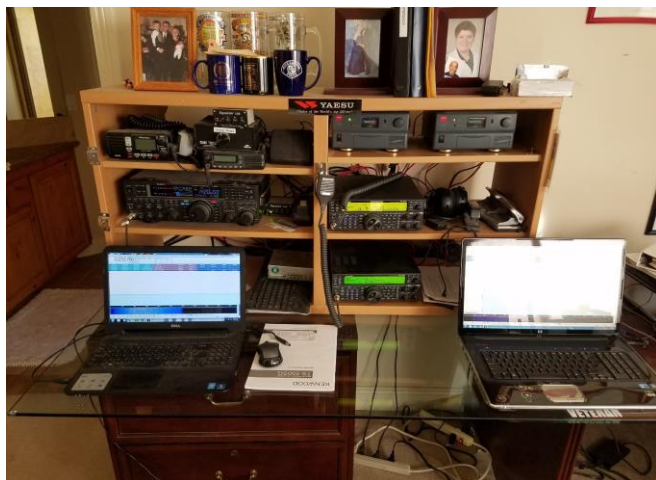
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Across the Country --No Wires (continued)

Telecommunications representatives at NACON Telecommunications Workshop.

The National HF Propagation Test proved that a radio text message can be sent from one coast to the other using relays. There was excellent reception between Pacific coast and the midland stations in D8 Eastern Region and Coastal Region. D1N had good reception from the D8 stations. D5 and D7 stations received excellent signals from D1N and the midland stations. The team expected that time of day would determine which frequency was better at receiving during a particular time. The test results bore this out.



The HF Propagation Test Team has recommended that the Auxiliary conduct additional testing with actual message traffic. The objective is to pass a 25-50-word text message from any district or sector to any other district or sector within 1 hour.

Further testing will be needed to define the best combination of stations to achieve the objective. Meeting the objective will prove a reliable capability to augment normal telecommunications capabilities. The team hopes to conduct this test in the second quarter of 2019. If successful, the team may recommend establishing a scheduled RTX net to further refine the capability.

The National HF RTX capability will be a welcome addition to our telecommunications toolbox. This coupled with our initiatives to expand our mobile communications capabilities and identify AUX members willing to deploy with radios to areas devastated by catastrophic events gives the United States Coast Guard useful, value-added contingency communications. BZ to all involved in these initiatives.

Controlled Flight into Terrain

Source: The FAA Safety Team

Reprinted with permission from November 2018 Cessna Pilots Association Newsletter

[You may find it ironic that the u-tube CFIT Video presented at the end of the article has Alaska flying examples only...Alaska where we
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Controlled Flight into Terrain (continued)

have no AuxAir presence. However, there are always lessons to be learned. Listen to these pilot's comments and their experiences, some first person...school is in session. The take aways are Risk Management (Safety Risk Management and Flight Risk Management), Situational Awareness, and knowing your equipment.

COMO David Starr - Division Chief-Aviation]

Technological advances in situational awareness have dramatically reduced the number of General Aviation Controlled Flight Into Terrain (CFIT) accidents over the past 20 years. Nevertheless, CFIT accidents continue to occur and at least half of them are fatal. This fact sheet will help acquaint readers with the precursors of CFIT accidents and highlight some technological and safety risk management solutions.

What is CFIT?

CFIT is defined as an unintentional collision with terrain (the ground, a mountain, a body of water, or an obstacle) while an aircraft is under positive control. Most often, the pilot or crew is unaware of the looming disaster until it is too late. CFIT most commonly occurs in the approach or landing phase of flight.

Accidents where the aircraft is out of control at the point of impact are not known as CFIT. Rather, they are considered uncontrolled flight into terrain.

Similarly, incidents resulting from deliberate acts, such as terrorism or suicide by the pilot, are also not considered to be CFIT.

In a typical year, there are about 40 CFIT accidents, about half of which are fatal.

Why does it happen?

Pop Quiz: CFIT accidents occur primarily at night. True or False? Surprisingly, the answer is false. It's logical to think that CFIT accidents usually involve inexperienced pilots in dark night and/or instrument meteorological conditions. In reality though, more than 75 percent of CFIT accidents in a typical year occur in daylight and more than half of those are in visual conditions. Although pilots involved in most CFIT accidents are not instrument-rated, more than 30-percent hold an instrument rating.

As far as CFIT accident precursors, continued Visual Flight Rules (VFR) into Instrument Meteorological Conditions (IMC) is the deadliest, proving fatal in most cases. The General Aviation Joint Steering Committee (GAJSC) did a study on a group of 41 CFIT accidents. Eleven, or 25% of these accidents were preceded by continued VFR into IMC and all of them were fatal.

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Controlled Flight into Terrain (continued)

Six of those pilots were instrument-rated and five were not.

Another big factor in CFIT accidents is wire strikes. You might think most wire strikes are confined to agricultural flying, but more than half do not involve this type of operation. Accident data also shows that wire strikes often occur below 200 feet above ground level. If you've got to fly low, give yourself some room. A little extra altitude – even 500 feet – will keep you above 90% of the wires.

Other top causes of CFIT are IFR procedural mistakes (e.g., flight below minimum enroute altitude, descent below MDA) and unrealistic aircraft performance expectations (e.g., high density altitude, tailwinds on approach). To avoid these pitfalls, make sure you're in compliance with all aspects of the clearances you accept and the procedures you fly. Equally important is to thoroughly research the environment you plan to operate in, especially at high altitudes and/or with short or obstructed runways.

How Can I Avoid CFIT?

Safety Risk Management (SRM) is a vital part of warding off a possible CFIT accident. It involves knowing what you're getting into and understanding what capabilities and resources you have that will ensure a flight is completed safely. This starts at preflight. Make use of a Flight Risk

Assessment Tool (FRAT) and the PAVE acronym (Pilot, Aircraft, Environment, and External Pressures) to help you build a personalized risk assessment before a flight.

During flight, you also need to stay vigilant to any changing conditions, like deteriorating weather, fuel status, and the onset of fatigue. Be ready and willing to adjust your plans. Don't let Plan Continuation Bias (aka Get-there-itis) lure you into making a poor decision. Having a Plan B at the ready can make a route change much easier to rationalize and accept.

There are a host of technological programs, applications, and devices that can aid pilots in situational awareness and risk assessment (e.g., moving maps with terrain overlays). In fact, pilots have access to more information than ever before and that has already contributed to a 20-year reduction in CFIT accidents. But all that information comes in many different forms so pilots must be thoroughly familiar with and proficient in device operation and information interpretation. Technology can also lead to unwanted distractions so remember to always Fly the Aircraft First!

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Controlled Flight into Terrain (continued)

Tips and Best Practices

Keep your skills sharp between flights by flying simulators or flight training devices. Many feature realistic graphics so you can get a look at unfamiliar destination environments. And you can practice instrument procedures before you have to fly them for real. But remember, simulation is not adequate preparation for flights to unfamiliar and/or challenging environments. Therefore, you should also make it part of your plan to get regular proficiency training with a flight instructor. Of course, we recommend FAA WINGS Pilot Proficiency Training, but no matter what program or instructor you choose, try to include scenario-based training.

Finally, be sure to give yourself some breathing room. That means at least a mile from airspace and 2,000 feet vertically from terrain you're trying to avoid. And since weather is very dynamic, you may consider even greater clearance distances to avoid any unexpected IMC.

The CFIT Video is something you should watch. <http://youtu.be/JBxg6hgbAr8>.



Ancient Al Letter to Pteros

ADM Charlie Ray

Aviator 2311

Reprinted with permission from Pterogram Fall 2018 edition

Greetings, Pteros.

In August, I attended the National Auxiliary Conference in Orlando. It was a great opportunity to recognize their contributions to our Service in the last year and to bid farewell to our tremendous outgoing Commodore Rick Washburn. It was also a great opportunity to engage with Aux Aviators and get caught up on their procedures and operations.



I started by attending an extremely professional class on Aviation Risk Management given by Commodore David Starr who serves in the Western Division of the 8th District. The lesson, combined with the discussion

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Ancient Al Letter (continued)

that followed, were a clear indicator that our Aux aviators are “all in” when it comes to applying Service standard risk evaluation techniques prior to missions and continuing dynamic risk mitigation throughout their missions.

Following this training session, we had a gathering of Aux aviators from around the nation in an exchange led by Commodore Alex Malewski. I was sincerely impressed by the breadth of missions that Aux air performs across our country. From ice patrols on the Hudson River and Great Lakes to SAR on the Western Rivers to Post Hurricane Logistics flights to serving as forward air controllers during our last hurricane season, the pride and professionalism demonstrated during our discussion were real indicators of how much Aux Air contributes to our Service’s Readiness and Responsiveness. All the participants sang the praises of their Air Station Leaders who provide the overarching management of their operations. They were very impressed with the quality of interaction with our OPS bosses and liaison officers and were sincerely appreciative for all the support.

Our Aux Air consists of approximately 500 pilots and observers who safely operate 174 aircraft ranging from helicopters to multi-engine jets. As I reflected on their selfless service, I was reminded of how fortunate our Coast Guard is to have our Auxiliary as part of the team. Next time you see an

Aux member, pat them on the back, and let them know how much we appreciate them.

Semper Paratus!

Upcoming Events

Do not miss out on N-Train 2019

January 28 – Feb 3, 2019



[Register now at this address](https://www.cgauxa.org/auxa/2019ntrain/)

[\[https://www.cgauxa.org/auxa/2019ntrain/\]](https://www.cgauxa.org/auxa/2019ntrain/)

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What's New

Workshops for Surface, AUXAIR, and Telecommunications are [now available on the directorate site](http://wow.uscgaux.info/content.php?unit=R-DEPT&category=WHATSNEW)
[\[http://wow.uscgaux.info/content.php?unit=R-DEPT&category=WHATSNEW\]](http://wow.uscgaux.info/content.php?unit=R-DEPT&category=WHATSNEW).

Still have questions on Risk Management, PEACE, STARR & GAR 2.0? So just what is it and how different is it from our current GAR TCT and Risk Management process? Well [here is a presentation given at NACON that should help clear things up for you.](#)

Reminder – don't forget to take a look at the Introduction to Risk Management Course (100202) in AUXLMS

<https://auxlearning.uscg.mil/>

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