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About the cover: Ganna Goncharenko’s photo of search and rescue training from the 2015 Photo Contest perfectly captured this issue’s theme of Helicopters to the Rescue. No matter what you do in, for, or around the helicopter industry, take a moment and be proud of the work that we do. The unique abilities of our aircraft make them an essential part of emergency response, whether government, military, contractor, or volunteer.

Features

When the Chips Are Down, Helicopters Go Up ........................................... 20
On the Ground and in the Air in Houston ................................................... 22
Helicopters: The Heroes of Hurricane Harvey ........................................... 30
Medical Missions in the Wake of Hurricane Harvey ................................... 35
Keeping the Lights On ........................................................................... 38
To Protect and Serve ........................................................................... 40
Riding Out the Storm ........................................................................... 46
Disaster Preparedness for Small Businesses .......................................... 48
Responding to an Earthquake ................................................................. 50
Innovations in Aerial Firefighting ............................................................. 54
Inspiring the Next Generation of Female Helicopter Pilots .................. 58
HFI Trailblazers: Frank H. Duke, Boeing Test Pilot, Reaches New Speeds 60

Departments

President’s Message .................................................................................. 4
Safety ........................................................................................................ 6
Maintenance ............................................................................................. 8
Education ................................................................................................ 10
Your Aviation Lawyer ............................................................................. 12
Your AME ................................................................................................ 14
Government Affairs ................................................................................ 16
Flight Path ................................................................................................ 64
Calendar of Events ................................................................................ 66
HFI Update ................................................................................................ 67
Last Hover ............................................................................................... 68
Index of Advertisers ................................................................................ 71
The Last Word ......................................................................................... 72

ROTOR® magazine invites its readers to submit articles about the international helicopter community for publication. The publisher reserves the right of final approval based on subject matter and space availability. Letters to the editor are also welcome. For information about submissions, please contact Gina Kvitkovich, director of publications and media, at 703-683-4646 or rotor@rotor.org.
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President’s Message

They Love Us When They Need Us

As many of you know, I have been in the helicopter industry for 50 years and have loved every minute of it. I must admit that at times I have lost my sense of humor with some of the disingenuous and hypocritical criticism of helicopters I have heard.

One of my favorite examples is an incident in New York City many years ago. I was confronted in a public forum by an elected leader who said helicopters were ruining the lives of his constituents. After declaring his commitment to protecting the community from us, he gathered his family and proceeded to one of the Manhattan heliports to board a helicopter to Kennedy airport, where they caught a flight for their vacation.

Because of the steady opposition to our industry by this guy and others like him, we are losing heliports, prevented from establishing new ones, and being restricted from airspace and our full operational capabilities. The greatest frustration is that generally these negative initiatives are not predicated on research, analysis, or facts. Instead, they are initiated due to misconceptions, political agendas, and raw public emotion.

There are certainly legitimate noise and safety concerns from various stakeholders, including the public, media, elected officials, and regulators, and our industry takes these comments seriously. Our commitment to resolve these issues is long-standing and, most importantly, is reflected in our daily activities.

Programs such as Zero Tolerance—Zero Accidents, the International Helicopter Safety Team, HAI’s Land & LIVE initiative, the HFI Rotor Safety Challenge, and the HAI Accreditation Program of Safety clearly demonstrate our commitment to safety as the first priority.

There have been many public complaints about helicopter noise. In response, HAI has established aggressive operational and training programs such as Fly Neighborly and other community outreach initiatives while working with manufacturers on the implementation of quiet technology.

The good news is that the helicopter industry is committing resources, manpower, and funds to these issues, and we are witnessing positive operational and cultural changes.

So this is the part where I ask, “Don’t we get any credit for all the good we do in the world, especially when you consider that most helicopter operations are performed for the benefit of the greater good of society?” We daily perform missions such as medical transport, law enforcement, disaster relief, search and rescue, aerial firefighting, and electric grid construction and repair, to name a few.

Let’s discuss where some of the negative perceptions about helicopters may be coming from. Many years ago, I participated in a public hearing for a proposed heliport. One woman was vocal in her objections because she believed its operations would pose a safety hazard and noise concern for the nearby neighborhood.

Sensing more to the story, I asked if she had children, and she said yes. I then proposed a hypothetical situation—which, I noted, I hoped would never occur. What if one of her children were critically injured in front of her home and a paramedic advised her that the child had to be transported to a trauma center via helicopter? Would she allow the helicopter to land on her property and transport her child? She unhesitatingly indicated that she would.

Because she was willing to allow the most precious thing in her life, her child, to be transported by helicopter, I then asked her: was it possible that her real objection to the heliport was not safety and noise but because it would be used by business people?

To her credit, she said yes. She felt the businessmen could travel via car, like everyone else. For her, the helicopter stood for something else. Her objections to the heliport were less about its operations than its passengers.

Helicopters are often seen as a symbol of whatever it is that you don’t want, whether it is income inequality or the modern, too-busy world. Yet when an emergency occurs, these same people pray for our help and expect the helicopters to respond.

However, a recent interview with a Hurricane Harvey survivor gives me hope about our future. The man and his family had been stranded by the floodwaters. When asked what it was like to be cut off from the rest of the world, the man said, “I was starting to believe my family and I were going to die. Then I heard the sound of the helicopters, and I knew we would be all right.”

People love us when they need us—and it turns out that they need us every day. They just don’t know it.

That’s my story and I am sticking to it. Let me know what you think at tailrotor@aol.com.

Fly safe — fly neighborly!

Best Regards,

Matt Zuccaro is president and CEO of HAI.
Working on Your Dreams?  
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To learn more and apply, visit  
[rotor.org/scholarships](http://rotor.org/scholarships)

Submit your completed application and all necessary documentation before midnight EST Nov. 30, 2017.
A typical day in the life of a helicopter pilot is anything but typical. Unlike airplane pilots, who usually only fly from point A to point B, “point B” for a helicopter pilot might involve plucking stranded survivors off rooftops after a flood or landing on a highway to pick up accident victims. During high-stress missions such as these, pilots must handle changing elements on the fly while maintaining a high margin of safety.

All pilots face unpredictable conditions delivered by Mother Nature. Wind, precipitation, temperature — each of these has been a contributing factor in accident and incident reports. During times of great need, when lives are at stake, pilots must carefully weigh risk levels to ensure the safe completion of the mission.

Performing in an emergency response role calls for flight crews to make split-second decisions while operating with many unknowns. The pressures are enough to push pilots and helicopters beyond their certified capabilities. One thing’s for sure, working under emergency response conditions is not for the faint of heart.

Risk management plays a key role in maintaining safety, especially in emergency response situations. Another tool available to pilots is a flight risk-assessment tool (FRAT). A FRAT enhances situational awareness for crew members in even small, seemingly innocuous situations. FRATs serve as a simple reminder that every flight has some degree of risk and can help reveal previously unseen hazards before they get out of hand.

Although pilots must absorb a lot of information at any given time, flight instructors and check airmen must emphasize the importance of assessing flight risks before any flight leaves the ground. More and more training institutions are utilizing standardized FRATs in their programs as they recognize that building a successful safety culture is a continuous improvement process.

Flexible Decision-Making
As with any complicated task such as flying helicopters during life-saving events, preparation plays a key role in success. In most cases, the amount of preparation conducted behind the scenes is usually reflected in the overall results. It’s always better to over-prepare for a critical flight than to be caught off guard and surprised by the unexpected.

Flight environments can change without warning, leaving pilots shaking their heads in disbelief. To help mitigate this uncertainty, it’s important to always have a plan B in place should you become uncomfortable with plan A. Plans are likely to change, and pilots are encouraged to develop any flight plan with contingency and flexibility in mind.

Setting Priorities
Multitasking between various tasks during time-critical missions is extremely important for ensuring safety. A contributing factor to many accidents is when pilots become distracted by low-priority issues they have no way of influencing. The attempt to save a stranded person on the ground can rapidly shift a pilot’s attention away from maintaining safety for the crew members and passenger already onboard the aircraft.

Studies indicate preoccupation with one priority is most likely to be detrimental to the accurate completion of another. When trying to sort through priorities, pilots must consider the level of urgency, the criticality of the event, and the amount of time a situation is going to require to achieve resolution. An emergency on the ground should never trigger an emergency onboard the aircraft.

Bottom line: When time is ticking away and the pressure is on, take a few extra seconds to slow down. Make logical and safe decisions, and don’t let an emergency response situation become an emergency in the cockpit.

By Steve Sparks

Steve Sparks is HAI’s director of safety and serves as coordinator for the U.S. Helicopter Safety Team.
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All U.S. air medical helicopters are required to equip with a flight-data monitoring (FDM) system by April 24, 2018 — and that day is fast approaching. The HEMS (helicopter emergency medical services) rule, as it is often referred to, was released on February 21, 2014, after more than three years of study and comment.

Although some elements of the rule are aimed specifically at the helicopter air ambulance sector, the final rule is applicable to most helicopter operators in one form or another. In addition to the FDM requirement, it calls for safety enhancements that range from basic visual flight rules (VFR) weather minimums to operational control centers, over-water requirements, radio altimeters, and flight risk assessments. These requirements came about as a response to helicopter accidents and an honest attempt to improve future safety.

Putting Data to the Test
HAI embraces the use of FDM technology. Capturing flight data — and mining that data for information that can improve operational safety — is now a widely accepted practice. In fact, analysis of flight data is one of the reasons the FAA’s Commercial Aviation Safety Team was able to reduce the fatality risk for airline transport operations by 83 percent in 10 years.

For the past three years, HAI has been working with the FAA on Rotorcraft ASIAS, a program to research and develop flight-data monitoring for rotorcraft operators. The program is voluntary for operators, who agree to equip their helicopters with FDM equipment.

HAI provides a neutral portal, where the data is de-identified before it reaches the FAA or academic researchers working on the project. While operators have full access to their own data, they only see other operators’ information as de-identified, aggregate data.

Parameters being tested include airspeed, altitude, rate of climb or descent, temperature, density altitude, and video and/or audio. The end goal is to turn the immense amount of data available to FDM users into usable safety indicators and encourage every operator, large and small, to install FDM to enhance safety.

A Zero-Accident Culture
However, equipping for FDM is only one aspect of our journey toward zero accidents. One of the challenges we must overcome is the very versatility that makes helicopter operations so exciting.

Some say that helicopters are the Swiss Army knife of aviation. Equipped properly, the aircraft can accomplish a number of missions. Attach a Bambi bucket, and it’s a firefighting vehicle. Equip with stretchers and medical devices, and now it’s an air ambulance. Law enforcement, heli-logging, agricultural spraying, construction and heavy-lift — there is no end to the uses of rotorcraft.

In most missions, we don’t take off from established infrastructure and fly predictable routes each day, like airlines do. Instead, we are landing off site, perhaps at night, in a location that we have never been to before. Each day’s flying can be unique. The variety and variability of helicopter operations means that establishing appropriate safety practices will be harder for us than it was for the airlines.

It’s Up to You
The most important safety equipment for any aviation operation are the people in it. Many accident reports tell the story of pilots, operators, and maintainers failing to follow safety procedures or dismissing automated warnings. No piece of hardware or software can ensure safety; that’s still up to us humans.

The FDM equipment only tells us how the aircraft was being operated in day-to-day operations. It does not repair or fly the helicopter; it does not manage personnel or equipment for the operation.

What FDM does do is give operators, pilots, mechanics, management, and leaders another tool in their bag to evaluate how, when, and where we fly. It is up to us to utilize that data so that we can get closer to our goal of zero accidents.

Participate in Rotorcraft ASIAS
If you would like to take advantage of flight-data monitoring in your operation, please contact the HAI Flight Operations Department (ops@rotor.org) for more information.
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What’s New for HAI HELI-EXPO 2018

Believe it or not, HAI HELI-EXPO 2018 is just around the corner. Where has the time gone since Dallas? Remember the promise you made to yourself — that this year you’d work on your professional development and safety awareness? It’s time to live up to that promise and achieve your goal of professional improvement.

HAI HELI-EXPO 2018 offers a diverse selection of educational programming, and many of the courses, sessions, or briefings provide FAA WINGS or AMT continuing education credits. Others offer credit toward renewing your inspection authorization (IA). No matter what your career goals are, HAI can help you get there.

In Las Vegas at HAI HELI-EXPO 2018, HAI will present more than 20 Professional Education courses. These in-depth courses require an additional registration fee and range in length from a half-day to several days. We have added some new courses to the lineup, and some popular courses from previous years are returning.

Night-Vision Goggles Ground School
HAI is excited to offer a night-vision goggles (NVG) course for the first time. Night-Vision Goggles from Beginning to End will be an excellent course for both the beginner who has never used NVGs, as well as the pilot who has many NVG hours but who may not have used them in some time.

Students completing the course will receive a certificate signifying the completion of the ground portion of NVG training. If you are thinking about adding an NVG endorsement to your pilot’s certificate, then this course will be a great place to start.

Fatigue Management Workshop
Another new course is Recurrent Human Factors: Fatigue Risk-Management Workshop. This course provides participants with the tools necessary to identify the warning signs of fatigue and apply effective countermeasures. The course content is appropriate for pilots, maintenance technicians, and any others involved in day-to-day flight operations.

Many HAI members have been conducting hurricane relief operations in Texas, Florida, and Puerto Rico. Understanding fatigue management will help to mitigate the risk incurred during these extended operations.

Part 135 Management Bootcamp
Based on feedback we received last year, we have revamped the Part 135 Management Bootcamp, splitting it into two separate courses.

Part 1 will focus on navigating the FAA Part 135 certification process. Part 2 will focus on the day-to-day operations of a Part 135 organization, including training, duty and rest limits, and adding aircraft and operational capabilities.

Helicopter Flight Instructor Refresher Course
Another course back by popular demand is the Helicopter Flight Instructor Refresher Course, which is one of the few in the United States that focuses specifically on helicopter instructors. If your helicopter flight instructor certificate is about to expire, this course provides you with an excellent opportunity to complete the training around your annual trip to HAI HELI-EXPO®.

Other popular returning courses focus on maintenance and operations management, operating an aircraft in the wire and obstruction environment, legal aspects of helicopter operations, implementing a safety management system, and much more. To see all the Professional Education courses to be offered at HAI HELI-EXPO 2018, visit rotor.org/takeacourse.

No-Cost Educational Opportunities
HAI and Helicopter Foundation International will again offer a robust schedule of Rotor Safety Challenge presentations that focus on maintenance, personnel, and aircraft safety. Generally one hour long and free to registered HAI HELI-EXPO attendees and exhibitors, these sessions are selected to provoke thought and discussion among you and your colleagues. Many will also offer WINGS and AMT credits.

The 2018 Rotor Safety Challenge will be held February 26–28. Please visit rotor.org/takechalleng~ to see the schedule and course descriptions.

Another professional development opportunity at HAI HELI-EXPO is the Manufacturer Technical Briefings, where aircraft and engine OEMs discuss techniques and procedures on many of the type model series helicopters, engines, and components. These briefings provide an excellent opportunity for both maintenance technicians and pilots to learn about the specific aircraft they work with, as well as to ask questions and provide feedback to the manufacturers’ representatives.

The schedule for this year’s series of briefings will be posted in November on heliexpo.rotor.org; look under the Education tab. Many Manufacturer Technical Briefings are accepted by the FAA for IA renewal.

Remember the promise you made last year, and make 2018 the year you meet your professional education goals. Visit rotor.org/education for more information about the education program at HAI HELI-EXPO 2018.

Greg Brown is HAI’s manager of education.
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News coverage of an aircraft accident usually ends with a reporter standing just outside a ring of police tape saying, “The National Transportation Safety Board has taken control of the crash site and will issue a report within a year.”

The National Transportation Safety Board (NTSB) is presented as a completely independent organization, but behind the scenes, it relies heavily on manufacturers, operators, and maintainers for technical assistance. However, even though access to the investigation is limited to invited participants, people outside of the investigation can also provide valuable information to the NTSB to help it figure out what happened and why.

Reliance on Industry
The NTSB investigates an average of 2,000 aircraft accidents and incidents every year with fewer than 125 aviation field investigators. It would be impossible for the agency to maintain technical expertise on every possible cause of aircraft accidents. Imagine one person juggling 20 investigations — all involving different aircraft, conditions, and possible causes — and you can begin to imagine the workload of an NTSB investigator.

The NTSB relies heavily on manufacturers, operators, and maintainers for technical assistance. When designated as party representatives, personnel from these groups get direct access to wreckage and records during the investigation. They participate in and often perform teardown inspections, and generally participate in every aspect of the investigation.

The NTSB actively solicits input from these party representatives for NTSB probable cause findings. Industry representatives often write major portions of NTSB factual reports and are asked to edit those reports before they are made public. These well-established procedures, detailed in NTSB manuals and guides, are intended to help the agency benefit from industry knowledge, even where participants are investigating their own products.

Industry Responsibility
Everyone who becomes a party representative to an NTSB investigation must sign a statement that he or she will give the NTSB all information pertaining to the accident that is “in any manner relevant to the investigation.” This requirement is to ensure there is no filtering of information before it gets to the NTSB for analysis.

Party representatives must also not participate in the NTSB investigation “for the purpose of preparing for litigation” and are prohibited from “occupying a legal position.” In other words, the rules prohibit party representatives from attempting to steer the investigation in any particular direction in anticipation of litigation — on their own or on the advice of their lawyers. Because information that comes out in the investigation is frequently used in court, the rules sometimes put party representatives in a tough position, requiring them to openly disclose information that may be harmful to their company in a subsequent lawsuit.

The NTSB is one of the few federal agencies that relies almost exclusively on people volunteering information. Although the agency has the legal authority to order people and companies to provide information, it rarely does because it simply does not have the resources to aggressively pursue every investigation.

Anyone Can Contribute Information
If you, your organization, or one of your organization’s products is involved in an accident and you have not been invited to participate, offer your assistance. The NTSB investigator may not know the technical assistance you could provide and may welcome your involvement. For example, if you are an operator, volunteer to participate to ensure the NTSB gets the information it needs and to ensure factual statements about your operations are correct before they become gospel by being published in an NTSB report.

Nothing prohibits people outside of the NTSB investigation from providing information to the agency. In fact, a great deal of the agency’s work involves gathering information and interviewing witnesses who have valuable information but were not solicited for technical assistance during the investigation. So, if you have not been invited to participate as a party representative or you are prohibited from participating, you can still contribute to the investigation.

Your Aviation Lawyer
“Your Aviation Lawyer” is a quarterly column to answer your legal questions about the helicopter industry and take the mystery out of aviation law. The goal is to reduce the chance of your involvement in an accident, incident, or even a disagreement, but if that fails, you should know your rights and responsibilities.
Here’s an example of how information from outside parties can aid the NTSB in its accident investigations. Recently, a fatal crash of a single-engine airplane occurred after an engine failure at altitude on a visual flight rules flight. No one suspected air traffic control involvement.

However, I learned that the pilot had declared an emergency and had asked the center controller for the nearest airport. The pilot was vectored to an airport 15 miles away instead of an airport 7.5 miles away that was well within glide distance. Then, as the aircraft was descending, the controller told the pilot there was a private strip 1 mile behind him. It was actually 10 miles away. The pilot turned around to reach the private strip, circled the area once, and crashed within a quarter-mile of where the private strip should have been.

It is unlikely that misdirection by air traffic control would have been considered by the NTSB unless someone provided that information.

But once the NTSB was alerted to that possibility, its Air Traffic Control Group did an exhaustive investigation into air traffic control performance related to the crash.

People injured in aircraft accidents and those representing them are expressly excluded by federal law from participating in NTSB investigations. But there is no prohibition against them contributing information to the agency and its investigators.

**Offer Your Help**

Even though NTSB probable cause reports are not admissible in court, NTSB factual reports are. What the NTSB reports as fact can have a big impact on claims arising out of accidents, in part because of the agency’s reputation for thorough investigations.

If you are not invited to participate in an NTSB investigation, volunteer. And if you still do not make the cut, do not hold back on giving the agency information you believe it needs to perform a complete investigation.

The bottom line: anyone can contribute to an NTSB investigation, so make your voice heard. No one can argue against a better-informed NTSB.

Jon Kettles, “Your Aviation Lawyer,” is an ex-military helicopter and fixed-wing airline transport pilot, certificated flight instructor – instrument, and aerospace engineer who for more than 20 years has been representing people injured and family members of those killed in aircraft accidents, as well as operators in product and insurance disputes. Jon can be reached at jon@kettleslaw.com.

**Visit http://bit.ly/PartyRep for information from the NTSB about contributing to an investigation and applicable regulations.**
Heart Health for Pilots: A Beginner’s Guide

All too often, I consult with pilots after they have suffered a cardiovascular event such as a heart attack or stroke. Heart disease remains a leading cause of death in the United States, and pilots are no exception.

From the perspective of maintaining your medical certification, it is much better to prevent disease in the first place than to deal with the consequences of it. Medical certification after suffering a cardiovascular event, such as a heart attack or having a stent placed, is extremely costly, time-consuming, and some argue, medically risky.

The Risk
Let’s say you’re a professional pilot who holds a second-class medical certificate and you’ve experienced a heart attack, resulting in a stent being placed in one of your coronary arteries. Depending on the vessel stented, you will be required to wait three or six months after the stenting procedure.

Once the waiting period is complete, you’ll need to submit all of your treatment records (and I mean all of them), a status report from your cardiologist, and lab work. You’ll also be required to submit results from an exercise nuclear stress test and a repeat cardiac catheterization.

Nuclear stress tests are expensive and expose patients to relatively high amounts of radiation. Repeat cardiac catheterization three or six months after having a stent placed is not routinely performed in clinical practice; some cardiologists feel doing this is unnecessarily risky. However, the FAA’s primary concern is the safety of the national airspace, so it will ask for any information that helps it to render a decision.

It is certainly possible to receive a special issuance if you’ve had a cardiovascular event. Airmen are certified every year with this history, some with fairly significant medical histories. However, wouldn’t it be better to avoid all this expense and medical procedures? Of course!

Maintaining a Healthy Heart
Below are some common-sense approaches to keeping your heart healthy.

Eat a Healthy Diet
A poor diet is a leading cause of the obesity epidemic in our nation. The first thing you need to examine is how often you eat out at restaurants. Food at restaurants is unhealthy by default, even meals marketed as “healthy,” and you should avoid them wherever possible.

This can be challenging for the professional pilot who frequently travels. If you have the ability, take food from home with you on trips.

When you’re home and ready to dust off the kitchen utensils, try the Mediterranean Diet. There are many books available on it, but the basic premise of this diet is to consume foods such as fruits, vegetables, nuts, seafood, and extra-virgin olive oil. Avoid red meats, sweets, and refined grains, such as white bread or white rice.

The advice of registered dieticians (clinicians who have an R.D. after their name) is another great resource for improving your diet.

Exercise
Getting some form of exercise is important to keep your heart healthy. Not everyone can exercise at the same frequency and intensity, so talk with your doctor about what is appropriate for you. A simple step for sedentary patients is to take a daily walk.

Stop Smoking
Getting rid of your cigarette habit is an obvious step for heart health, but quitting can be very difficult. If you are ready to quit, talk with your doctor about the best approach for you.

Keep in mind that medications prescribed for smoking cessation, such as Bupropion (Wellbutrin) and Varenicline (Chantix) are disqualifying for medical certification. There is a national toll-free number...
to call where you can connect with additional resources for quitting: 1-800-QUIT-NOW.

Control Your Blood Pressure
I’ve written on this subject in previous columns (see p. 16 of the Summer 2017 Rotor). If you have hypertension, treating it is a no-brainer: most medications to control blood pressure are approved, require minimal downtime, and can be assessed by your AME through the streamlined CACI (Conditions AMEs Can Issue) process.

See Your Doctor
A regular visit to your doctor can check for conditions such as diabetes, high cholesterol, chronic kidney disease, and obesity, all of which raise your risk for heart disease. Having a regular check-up is the best way to catch these conditions early, when they are most easily managed. For example, obstructive sleep apnea is a common, major risk factor for heart disease and can impair your ability to fly safely. But regular visits to your doctor can ensure your risk factors are diagnosed and treated before they spiral out of control.

The Best Outcome
If you find yourself in the position of needing to regain your medical certificate after experiencing a cardiovascular event, be sure to work with an experienced AME who can help you navigate the complex requirements. Better yet, follow these steps and work with your doctor so you hopefully never have to worry about it.

Dr. Charles H. Mathers
is an FAA senior aviation medical examiner and is board certified in Aerospace Medicine. He serves as medical director for the Aerospace Medicine Center at the University of Texas Medical Branch in Galveston, which specializes in the evaluation of pilots with complicated health conditions, fitness for duty evaluations, and monitoring of pilots in the HIMS program. He has been a private pilot since 2004.

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Last issue, I began my column by remarking about my murky crystal ball and its ability to predict how Congress would vote on the looming air traffic control (ATC) privatization bill. Fast forward a few months — the crystal ball may still be hard to read, but I do like what I see.

GA United
In the face of this paradigm change to U.S. civil aviation, the general aviation (GA) community is united like never before. We now have nearly 200 GA organizations on record as opposing ATC privatization. HAI and the GA associations here in Washington, D.C., continue to visit Capitol Hill offices, making it clear that we will fight ATC privatization until we win. Some big names in the aviation community heard our story and have joined us in the fight. People like Capt. Jim Lovell, Capt. “Sully” Sullenberger, Gen. “Fig” Newton, Sean Tucker, and others have stepped up and added their voice to ours.

And let’s not forget you. You added your voice to the collective voice of all GA, and we have been heard on Capitol Hill. Believe me, if we hadn’t spoken out about this bill, it would already be the law of the land.

Is it time to take a celebratory swig of Diet Pepsi and devour that large helping of Ghirardelli brownie? No, keep those wild parties at bay a little longer. We still have work to do.

It’s Not Crying Wolf If There’s One at the Door
Let’s dive a little deeper into where things stand. As we previously reported in Rotor Daily, at the end of September Congress was faced with a pressing deadline to pass an FAA reauthorization bill. The FAA’s taxing authority was set to expire on September 30. By the end of the month, with both the House and Senate FAA reauthorization bills in limbo, Congress took steps to pass a six-month extension. President Trump dutifully signed that extension, and we collectively kicked the can down the road to March 31, 2018.

I’m sure by now you are sick and tired of hearing about ATC privatization. Since I joined HAI just nine short months ago, it has pretty much been my singular focus. Not a single column, report, or email goes out without my predictable plea for HAI members to contact their elected officials and state their opposition to ATC privatization.

If you are tired of these messages, think of those Hill staffers who hear from me and the other GA trade associations every day. Or my poor wife — the words “ATC privatization” are banned from the house.

It is understandable if HAI members view our reporting and appeal to action as repeated cries of “Wolf!” However, the moment you let down your guard, that wolf will bite. ATC proponents are smart and dedicated to their cause. They will take advantage of every tool they have to pass this legislation. It is important that we tell Capitol Hill that the GA community is paying attention.

If you are asking yourself how did we end up here, then blame the Founding Fathers. We live in a democracy, and democracies are messy. The legislative process is sausage-making at best.

ATC privatization is backed by the administration, a strong and skilled committee chairman, and backers with deep pockets. They have the right to voice their support for this policy and push for its enactment — just as we have the right to oppose it. If we were in North Korea, we would not have this drawn-out legislative contest. But then, if we lived there, ATC privatization would not be one of our most pressing concerns.

Each time our legislative duel over ATC privatization recommences, our requests to you become louder — because if you don’t show up for a fight, you forfeit and lose. We have called the membership to action each time proponents have attempted a vote. Each time, HAI members, along with the rest of the GA community, answered those calls to action. As a result, the vote has been consistently pushed back.

Two Reasons to Avoid a House Vote
In the last issue of Rotor, we discussed why ATC privatization was bad policy for GA. In this column, I want to explain why this House vote is so important. It is readily acknowledged that the Senate has little appetite to take on ATC privatization. So if the Senate won’t vote for privatization, why are we working so hard to avoid this House vote? Our goal-line defense is important for two reasons.

First, precedence. Congress (and the U.S. legal system) is built on precedence. While this bill has passed out of the committee of jurisdiction, it has never passed either the House or the Senate. That is a strong historical
record that highlights GA’s decades-long, unwavering opposition to ATC privatization, as well as a lack of support for it in either chamber.

Second, conference. If you remember Schoolhouse Rock!, you will recall that if the House and Senate pass a different version of the same bill, they go to conference to resolve the differences. Conferences are where deals are cut, and politics is at its best. When both sides come to the table to deal, things can become unpredictable. If the House passes a pro-privatization FAA reauthorization bill and the Senate passes one that keeps ATC with the FAA, we still have a big problem.

To prevent that situation, we need to ensure that the House does not pass a version of the FAA reauthorization that contains ATC privatization. Plain and simple.

The general aviation community is united like never before. We now have nearly 200 GA organizations on record as opposing ATC privatization.

Say No to ATC Privatization
So smile when you see another email from us asking you to contact your elected officials. Stand with your GA family, and let your voice be heard. Invite your colleagues to reach out as well. Text ROTOR to 40649 and you can then directly email, tweet, and Facebook message your elected officials. Your voice matters and your voice has an impact. The fact that this bill, which was introduced June 22, has not yet made it to the House floor shows the power of our united voice.

Keep those brownies in the oven a little longer, and soon enough, we’ll all enjoy some Ghirardelli and ice-cold Diet Pepsi, along with the satisfaction of preserving the world’s safest ATC system. Reach out to Congress today!

Cade Clark is HAI’s vice president of government affairs. Cade can be reached at cade.clark@rotor.org.
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When the Chips Are Down, Helicopters Go Up

By Dan Schwarzbach

If you are in trouble anywhere in the world, an airplane can fly over and drop flowers, but a helicopter can land and save your life.

– Igor Sikorsky

During the recent Helitech International 2017 conference in London, one of the most popular decals collected by attendees visiting the HAI booth expressed this sentiment: “Above All … Helicopters Save Lives.”

It’s certainly one of my favorite slogans for the helicopter industry. Unfortunately, we lately have had plenty of opportunities to demonstrate the important ways we contribute to the common good, with communities around the world facing fires, floods, storms, and earthquakes. It seems when ordinary life is disrupted, when things are serious and the chips are down, helicopters go up.

This special issue of Rotor is devoted to the theme of Helicopters to the Rescue and the role our industry plays in emergency response, protecting lives and property, and helping those affected get back to normal life.

As you may imagine, a major motivation for those who become police officers, firefighters, and search and rescue specialists is often a desire to help others, especially those in need of rescue from some sort of adverse situation. I know it was for me and many of the fine individuals I’ve had the privilege to work with in public safety aviation.

To be able to perform that assistance from a helicopter is icing on the cake! We can swoop in like white knights aboard our trusty helicopter steeds and provide hope and safety to those in need, delivering services and supplies or carrying them out of harm’s way.

During times of crisis, helicopters provide many services in addition to providing lifesaving medical attention and transport to the injured. They provide safe and efficient passage for workers to and from offshore petroleum platforms, ensuring minimal downtime and, therefore, minimal impact on the production of materials on which modern life depends.

Helicopters also provide transport and situational awareness to those involved in emergency management. They assist with the most efficient and effective placement of resources to speed recovery, and they provide...
a platform from which to perform critical infrastructure checks and repairs.

For me, saving lives means not only providing emergency care or removing someone from immediate danger, but ensuring that normalcy and quality of life are restored as soon as possible. By this definition, helicopters save lives every day in all parts of the world. We play a role in not only keeping the lights on and your neighborhood safe, but also in putting produce in your supermarket basket and gasoline in your car.

In responding to the hurricanes that recently struck several Caribbean islands as well as Puerto Rico, Florida, Louisiana, and Texas, including my hometown of Houston, our industry has once again illustrated its significant role in restoring and maintaining the quality of life for those affected by natural disasters. Law enforcement, firefighters, the Coast Guard and National Guard, emergency medical services, oil and gas, utilities, and many others used helicopters in one way or another to assist those whose lives were disrupted. Government and general aviation operators worked together for the common good.

In the pages that follow, you will read stories regarding the roles helicopters played in response to Hurricanes Harvey and Irma, as well as fighting U.S. wildfires and helping New Zealand residents cope with a 2016 earthquake. We talked to operators who service the offshore petroleum platforms in the Gulf of Mexico and those who keep the U.S. electrical grid operating, both in regular and extraordinary conditions.

Helicopters will continue to play a role in the recovery of these areas, a role that in many cases, only we can fill. Our industry is an essential part of the U.S. emergency response infrastructure. And like any infrastructure, we need the support of the FAA and our lawmakers to ensure that we will be ready when the time comes.

During my 37 years as a police officer with the Houston Police Department, I have been blessed with many opportunities to make a difference. I know from firsthand experience that it is extremely satisfying to play a role in improving someone’s situation. There truly is no greater reward.

No matter our mission, our industry provides us the opportunity to positively affect the lives of many people on a daily basis. Whether we fly helicopters, crew them, maintain them, or support them with supplies and services, we should all be proud to be a part of this industry. Because when the chips are down, we go up.

Dan Schwarzbach is the current chairman of HAI’s Board of Directors, a senior police officer for the Houston Police Department, and the executive director of the Airborne Law Enforcement Association.

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Two Stories from the U.S. Coast Guard

On the Ground and in the Air in Houston

Around the world, men and women use their helicopters every day to make a difference for others. Below are first-person stories by two Coast Guardsmen who participated in Hurricane Harvey relief operations.

When reading their accounts, a couple of points jump out. First, these two service members continue the proud Coast Guard tradition of “Semper Paratus” (Always Ready). Second, as a nation, we are fortunate to be able to call upon them and other first responders in times of need.

“Born into Utter Chaos”
By Petty Officer 3rd Class Allison Dowell

This is not a normal operation. U.S. Coast Guard Air Station Houston, usually home to three MH-65 Dolphin aircraft, has become the Coast Guard’s largest air station overnight. It suddenly houses HC-130s, HC-144s, MH-60s, and MH-65s. The aircraft stretch as far as the eye can see, and the numbers are climbing.

By August 29, things have settled into a routine of sorts, but that makes it no easier to adjust. Because of a lack of transportation to and from the various locations housing crews, morning shift starts somewhere around 4:00 a.m., when the wait for a shuttle starts. The briefing comes at 6:00 a.m., with flights near 8:00 a.m.

Later, our goal is to try to meet massive crew staffing requirements while balancing safety and crew fatigue, but during the first few days, we simply try to do as much as possible, as quickly as possible.

The crews turn around sometime around 2:00 p.m., with the true work of the afternoon shift starting at noon and going into the night. The first shift often does not get back to quarters until well past 6:00 p.m.

Because we aren’t familiar with the area and the flooded, wind-wracked
terrain poses additional hazards, flying for the H-60 crews ceases shortly after the last light of the day is extinguished. It is a grueling, unrelenting schedule.

If there is one thing that does feel familiar, it is the weather. While the rains of the Pacific Northwest are not usually so strong, operating in poor conditions is part of the job for crews out of Coast Guard Sector Columbia River, my normal duty station, located in Warrenton, Oregon. The ceilings (300 feet) and visibility (somewhere around 1/2 mile) found over Port Arthur, Texas, could be found anywhere in Oregon and Washington.

However, the antennas, some reaching up to 600 feet and well above the cloud level, are not. It is the job of Lt. j.g. Tripp Haas, a helicopter pilot also from Sector Columbia River, to navigate around them, but with damaged and overused infrastructure occasionally failing, the task is demanding, even with the helicopters of other services staying away for the moment. The systems we usually take for granted are suddenly not the best options, and Haas gives directions that he pulls off of Google Maps.

“Turn right on 8th over here,” says Haas.

We are on our way for a pickup, a distress call routed through a makeshift command center about a pregnant woman in labor. The flying en route has been challenging, but it has done little to prepare for us for what is ahead in Port Arthur.

It is not the sight of homes underwater that is unexpected, nor is it the sheer number of people in need of assistance. What does look strange as we streak over houses, streets, and cars, are the power lines and trees that usually create a tidy grid for a neighborhood but now sprawl brokenly over it.

The power lines provide some of the more difficult obstacles to overcome. Hoisting swimmers between them is new but not impossible. Convincing a nine-month pregnant woman and her mother to get into a rescue basket in murky water thick with oil and sewage and be hoisted up turns out to be.

Lt. Cmdr. Kevin Rapp, a former Army medevac pilot and Coast Guard aircraft commander with 18 years of flying under his belt, suggests an alternative: an on-ramp to the partially flooded I-10 highway. It is a confined area landing, something trained for in Astoria on logging hills and between tall pines of different proportions.

Here in Houston, there are different obstacles. A black truck tries to get past us as we settle onto the pavement. There are stoplights to think about.

Rapp’s steady stick guides the MH-60 down smoothly. Within minutes, not only is the pregnant woman and her mother loaded onboard but so is another woman. She’s so far along in labor that her contractions are coming only a couple minutes apart and her water has long since broken.

We make our approach to a hospital in Beaumont, Texas, where the rain is whipping back into the cabin sideways. The visibility is so poor, we need all the visual space we can get and a closed cabin door would
do nothing but restrict it. We land in 2 inches of water beside the hospital parking lot, avoiding wires, trees, and a fence. We unload and take off again.

The cases continue to come like this. Air assets from other services slowly join us as the weather improves until I am hoisting above an apartment complex and able to count six aircraft just on one side. There are enough people waiting below us that we could hoist and cram the cabin full, then come back 10 times and we still wouldn’t get them all.

We load another pregnant woman and her family of terrified children, who are only slightly less terrified when glow sticks are cracked, shaken, and handed over.

People are swarming and moving toward the rescue basket and our rescue swimmers, or as we call them aviation survival technicians. For a moment, we are concerned that they may be mobbed, but Petty Officer 3rd Class Brendan Kiley, an AST from Air Station Cape Cod, Massachusetts, and Petty Officer 3rd Class Dave Braaten, an AST from Air Station Traverse City, Michigan, take control of the situation.

When we leave with the family in the back, an Air Force Pave Hawk swoops in to pick up immediately where we have left off. We get gas. The family gets off. The rain continues. We are soaked and not particularly concerned.

It takes a while to get gas at the field because of the sheer amount of assets. The fuel trucks, two of them with a tiny capacity, are being manned by stranded aircraft rescue and firefighting crews who can only do so much when every other stop requires a replenishment of the tanks.

We lift back up and fly again. I don’t know how we found the next group, only that we did. We have to navigate more power lines with this hoist — there are power lines everywhere, trees everywhere, shingles trying to come off roofs, and portable basketball hoops lying on their sides underwater.

The next family is wearing life jackets. When they’re up with us, it must be the first time they realize the extent of the destruction because the woman starts sobbing and continues to do so, even after we move to the next place and the next hoist.

Here, there are boats. We pick up a woman and her child. We drop our passengers off quickly, without shutting down.

In a short time, we’ve now airlifted 14 people, 17 total lives if you include the ones soon to be born into such utter chaos. On our return flight to Air Station Houston, we are requested to divert by Houston Approach and fly over a broken levee that has swept away a family, but despite almost an hour of circling, we find nothing. We are over our flight time limit when we finally shut down.

While search and rescue is the most visible mission we perform in Texas, it is not the only one. On our second flight, we conduct a Ports, Waterways, and Coastal Security mission. Like search and rescue, providing security for U.S. marine infrastructure is one of the 11 official Coast Guard missions. Usually, it is a simple surveillance flight; today it becomes something more.

The Colorado and Brazos rivers are cresting, swelling past their breaking points with refineries near the banks of the rivers leaking oil and chemicals; the water has turned into double chocolate milk.

From 500 feet above, floating logs and boats almost look like tinker toys. But the toy-like illusion only goes so far since the oil and chemical sheens are unmistakable, as are the barges that have crashed into one another, then into the banks, crowding and blocking traffic paths.

It all needs to be documented, and we bring along a marine science technician to do just that. Coordinates are marked, photos are taken.

In the port of Galveston, dolphins jump out of the water precariously close to the bow of one of the first cargo ships to enter the mouth. It is the first sign of things returning to normal.

Petty Officer 3rd Class Allison Dowell is an avionics technician at Coast Guard Sector Columbia River in Warrenton, Oregon.
“Do You Want to Go to Texas?”
By Petty Officer 2nd Class Jake Cimbak

There are nine U.S. Coast Guard (USCG) air stations that operate Sikorsky MH-60 Jayhawks throughout the United States. Each air station has a specific area of responsibility that offers unique challenges. All perform like well-oiled machines, handling the Coast Guard’s many missions, including search and rescue (SAR), law enforcement, drug and migrant interdiction, fisheries enforcement, and environmental protection, to name a few.

Coast Guard MH-60 aircrews are unique in that we perform as maintenance technicians on the ground and also perform as aircrew in flight, either as basic aircrew or flight mechanics. I’m qualified as a flight mechanic and also as a watch captain at Sector Columbia River in Oregon. We rotate duties with each other within our small watch section.

Every USCG MH-60 that flies on SAR missions brings a pilot-in-command, copilot, flight mechanic, and rescue swimmer. Each night, a SAR crew sleeps on base, ready to launch in a helicopter at a moment’s notice for those in need.

When I perform duties as a flight mechanic, I am responsible for the overall integrity and maintenance of the aircraft. I’m also entrusted to perform as the hoist operator on rescue missions, deploying rescue gear and the rescue swimmer, and bringing survivors into the cabin.

Each air station follows a meticulously scheduled maintenance plan, put into place by the unit’s engineering officer, maintenance officer, and the enlisted watch captains, who task the technicians with performing the complex work, fixing discrepancies, and turning them into corrective actions.

When I perform duties as a watch captain, I am entrusted by unit leadership to carry out the specific maintenance plan for three helicopters, the smallest allowance of helicopters at any given Coast Guard air station. Being watch captain is the kind of position where the details really matter. It’s incredibly important to dot all your i’s, cross all your t’s, and constantly double-check yourself.

Enter Hurricane Harvey. I was at work Friday, August 25, buttoning up things for the day and getting ready to give pass-downs (maintenance items that still required attention) to the night shift and go home for the weekend. I had heard on the news that a hurricane was bearing down on Texas and was potentially very destructive.

The engineering officer, Cmdr. Dave Feeney, arrives at work and sees me standing in the Maintenance Control Office. “Do you want to go to Texas?” he asks me.

I immediately respond, “Yes,” without hesitation.

Three days later, Monday, August 28, I arrive in Houston via a Coast Guard HC-130 Hercules. I step off the plane onto the tarmac and am
immediately greeted by both humidity and a hot, sideways-pelting heavy rain. I am instantly soaked from head to toe and would basically remain so for the next 48 hours. By this time, Harvey had been sitting over Houston for the past 48 hours, slowly moving east at 3 mph, dumping torrential rain everywhere.

The air station in Houston is another small three-helicopter unit similar to Astoria, only it uses the MH-65 aircraft. When I walked toward the makeshift MH-60 hangar — it is privately owned with an owner kind enough to let the Coast Guard use it — I witnessed a beautiful sight: three MH-60s landing in the rain, just returning from SAR missions with tons of lives saved.

Further north along the air strip, outside the MH-65 hangar, I see two fuel trucks parked on the ramp, refueling two MH-65s while their rotor heads are still turning at 100 percent — we call this hot-gassing. Two more MH-65s are waiting patiently in line for their turn to hot gas, and then two more H-65s land and line up to wait their turn for fuel. These fuel trucks would remain permanently parked on that ramp for the next three days, only moving to refill themselves with more fuel.

The MH-65s ran this pattern for 72-hours straight, flying 24 hours per day. They only stopped when maintenance became due or when discrepancies prevented them from going back out.

I walk into our makeshift MH-60 Maintenance Control Office. In one corner is a small restroom; another corner houses a small kitchen with stacks and stacks of MREs and a fridge loaded with bottled water, Gatorade, and Red Bulls. A cheap coffee machine is set up on the counter with about 200 small, white plastic cups.
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database of maintenance. He told me to walk to MH-65 maintenance control several buildings down. I immediately begin the quarter-mile trek through the torrential downpour.

I find my way through the MH-65 hangar. Four of them are parked inside, all from different units, ironically none from Houston. All four have complex maintenance being performed on them. They had already flown on SAR missions, saved hundreds of lives, and now were down for maintenance until they could be released again to fly more SAR. As many as 20 other MH-65s were currently out flying on SAR.

I find a good friend inside the hangar, Lt. Charles Whitesel, normally stationed at Aviation Training Center Mobile, Alabama, whom I had gone to boot camp with 11 years ago. He points me in the direction of internet access.

I log into our aircraft maintenance database with my friend Petty Officer 1st Class Chris Castro, an aviation maintenance technician also normally stationed in Mobile. For the next two to three hours, we search through the database for each individual MH-60 tail number that is temporarily assigned to Houston. I also happen upon a Command Center room. A Coast Guard commander there gives me the names of the tail numbers that are due to arrive still in the next 24 hours.

I now have the beginnings of a Houston Maintenance Plan with 13 MH-60 tail numbers written down from different air stations such as Mobile, Clearwater, Elizabeth City, and even Cape Cod and San Diego. Chris and I went “through the books” of each tail number, one at a time, very meticulously acquiring each tail number’s current aircraft hours, specific special inspections due, and open discrepancies.

Figure 1 shows what my completed tail number maintenance plan looked like. It wasn’t complicated, but it did the job. The green arrow pointing up indicates the 6001 is able to fly. The red arrow by the 6038 indicates a grounded aircraft.

As you can see, each tail number has different maintenance requirements. However, they generally follow the same guidelines. Knowing that all these MH-60s would only be there temporarily for the hurricane surge, our rule of thumb in Houston was that we were not to go over the 200-hour DNE (Do Not Exceed) limit.

After around three hours of meticulously recording every aircraft hour and every special inspection hour, I walked through the rain and the hot Houston night air and found my way back to the MH-60 Maintenance Control Office.

Over the next hour and a half, I transferred all the data from my notepad onto the big white board. Now where to hang it? As if it were meant to be, two nails were sticking out of the pillar connected to the kiosk, a perfect location to post the board.

The maintenance officer on scene was impressed and very thankful that I took the time to do it. Of the 13 MH-60s either on scene already or due to arrive soon, we had seven “up” assets or six grounded ones.

The next few days would be very long and daunting, but the maintenance plan I helped set up gave us a big-picture idea of where to start organizing individuals and teams for jobs on each aircraft. In a nutshell, I helped to organize a small part of all the chaos into a much easier-to-manage setting and kept as many aircraft “up” as possible.
Helicopters: The Heroes of Hurricane Harvey

By Dan Reed

Dolphins, Seahawks, Black Hawks, Hueys, JetRangers, LongRangers, and TwinRangers, Sea Dragons and Super Stallions. S-70s, AStars, TwinStars, H125s, and H145s. AW109s, 119s, 139s, and 149s. They were all there in Texas and Louisiana in the aftermath of Hurricane Harvey in late August and early September. Even a few giant Chinooks and tiny R22s got in on the action.

No event this side of a full-scale military battle presents as big of an opportunity for helicopters to demonstrate their unique abilities to serve mankind as does the aftermath of a hurricane. And no recent storm has presented a bigger opportunity—or need—for helicopters to show their stuff than Hurricane Harvey.

Hurricane Harvey is almost certain to rank as one of the worst storms in U.S. history in terms of economic damage inflicted. That’s because it spun very slowly for six days over a 400-mile stretch of coastal plains from the mid-Texas Gulf Coast all the way up and over to western Louisiana. In the process, some places experienced hurricane-force winds for three days straight. Others, including Houston (the fourth-most populous U.S. metropolitan area), got a year’s worth of rain—58 inches—in just six days.

Here to Help

Although Americans’ TV screens were filled with scenes of all different kinds of boats cruising down urban streets to rescue homeowners from rising waters, it is highly likely that the 82-person death toll from Harvey would have run deep into the hundreds, if not for the impromptu fleet of military, civil, and commercial helicopters that came to the rescue. Thus, it was something of a blessing that the Texas and Louisiana coastal region is one of the most heavily “helicoptered” areas on Earth, thanks to the presence of enormous offshore oil and gas operations in the north and northwest Gulf of Mexico.

Several hundred commercial helicopters, most of them designed to carry eight or more passengers, are based in the area. The region also is home base for more than 100 U.S. Coast Guard, Navy, Marine, Army, and Air Force helicopters, whose ranks were significantly supplemented by helicopters from National Guard units from around the nation, including from as far away as California, Minnesota, New York, and Virginia.

There’s no official total of the number of people rescued during
the nearly two weeks that search and rescue operations were conducted. The Coast Guard counted 11,022 people rescued, plus 1,384 pets. But most of those were rescued by boat or high-wheeled vehicles.

Based on a variety of sources, more than 500 people were rescued by rotorcraft. The actual number is likely closer to 1,000, of which at least half were winched up to helicopters hovering above locations that could not be reached any other way.

Helicopters were even used to save the lives of thousands of cattle and other livestock that were cut off from food and threatened by rising flood waters. Ranchers in some cases turned to light, highly maneuverable, single-engine helicopters like the R22 to herd livestock through floodwaters to higher ground. In the process, they saved the ranchers and American consumers several billion dollars in lost beef production. Not only were the cows at risk of immediate drowning, their thin skin makes them very vulnerable to infections caused by prolonged contact with disease-causing bacteria commonly found in murky, contaminated flood waters.

A Storm Brews
All those dramatic heroics don’t even begin to tell the full story of the role that helicopters and helicopter operators played in the response to Hurricane Harvey. It’s a story that began on August 17, when a storm labeled Potential Tropical Cyclone 9 was still several hundred miles east of the Lesser Antilles islands and 500 miles north of Suriname on the northeast coast of South America. That storm appeared at the time to be headed toward the Yucatan and southern Mexico. But any time such a storm shows potential for entering the Gulf of Mexico, helicopter operators in the U.S. Gulf Coast region start paying attention and checking in with their offshore oil platform clients.

Two days later, Harvey, which had made it to tropical storm strength before scraping over the Yucatan as mostly a windy rainmaker, was downgraded to a mere tropical wave. Gulf helicopter operators and oil exploration outfits breathed a sigh of relief.

But on August 23, Harvey, by then in the Bay of Campeche off the coast of Mexico, gathered enough strength to be upgraded to tropical depression status. It then turned north toward the Texas coastline. The next day it formally became a hurricane and rocketed to Category 2 status. Operations at coastal Texas and Louisiana helicopter bases and offices picked up tempo dramatically.

“We have a pretty good plan for responding to hurricanes,” says Paul White, senior vice president – commercial at Houston-based Era Helicopters, the largest operator in the Texas region of the Gulf. “Once a hurricane enters the Gulf, we begin evacuating all nonessentials [workers] off the rigs out in the Gulf. The other ‘essentials’ come off later, depending on the path the storm appears to be taking.”

By August 24, with the storm...
drawing a bead on the mid-Texas coastline somewhere between Corpus Christi and Port Aransas, the decision was made to shut down all the rigs off the Texas coast. But Harvey not only grew quickly to a Category 4 storm by the next day, its forward speed increased. Massive rain bands more than 100 miles ahead of the storm’s center buffeted the Texas coast all day, complicating helicopter pilots’ already very busy day.

“Normally, a pilot will move about two crews to and from the platforms in a day. Pilots spend the rest of the time back at the base, getting a rest break and then preparing for later flights,” White says. “But on the 24th and 25th, they were making four to six runs per day, per aircraft, depending on how far out they had to fly to reach certain platforms. Then we had to evacuate our four bases that were in the path of the storm at Lake Jackson, Galveston, Baytown, and Johnson Bayou.”

Other operators were doing much the same thing.

“We started pulling in personnel from the offshore platforms,” says Mark Behne, vice president of Westwind Helicopters, based in Santa Fe, Texas. “We had a helicopter down in Brownsville finishing up a project way down there, and we pulled that aircraft back up the coast to help out.” Westwind operates a fleet of Bell 206s and 407s from six bases in southeast Texas and western Louisiana. “We also started pulling personnel off some Louisiana platforms. Our two helicopters in Cameron, Louisiana, made 20 to 30 landings combined in the days right before Harvey hit,” Behne says.

Helicopter operators also began surveying their own facilities and teams to determine which facilities and helicopters would be vulnerable once the storm hit, and which employees would be available to work immediately after the storm. Most crews were either moved to bases so they could get back in the air immediately after the storm passed, or told to fly their helicopters east to Louisiana and out of harm’s way.

Others, however, remained at home, and in at least one case, had to be rescued by a helicopter from a home cut off by flood waters.

**In the Aftermath**

After the worst winds from Harvey subsided southwest of Houston on August 26, helicopters quickly relaunched to begin assessing the damage and helping rescue teams on the ground.

Westwind Helicopters got into the air quickly to help local and state emergency management staff begin their rescue and relief efforts in the wind-devastated region from Rockport to Victoria, Texas, even as torrential amounts of rain continued to pour down on the Houston metropolitan area 150 miles up the coast for another two days.

“We moved emergency personnel around. We did patrols,” Behne says. “We supported a pipeline company in looking for gas leaks. We sent two aircraft to support a local power company in the area between Corpus Christi and Victoria, looking for major breaks because getting the power back on was a top priority. Sometimes we had to get personnel to substations to get the power back on. A lot of those power and gas sites are simply not reachable by ground when there’s floods. That’s where helicopters can be a real force multiplier.”

Era Helicopters took on similar assignments, making available to the Coast Guard one of its helicopters that was already configured to perform search and rescue operations. That aircraft was directed to the inundated Beaumont area to get stranded residents off the roofs of their flooded homes, or seriously ill people to functioning hospitals (all of Beaumont’s hospitals were knocked out of commission by flood waters).

“In one case, our search and rescue crew working in the Beaumont area rescued a mother and her 13-month-old baby, who needed a feeding tube,” White says. “We put one of our guys down on the ground and he quickly determined that the baby wasn’t a good candidate to be hoisted up, but our pilot was able to find a spot nearby where he could put the helicopter on the ground. We picked them up and got them to a
hospital on time,” says White.” Our crew was very humbled to be a part of all that.”

**Meanwhile, in Louisiana**

Operators with bases in Louisiana or those who had flown helicopters there to keep them safe during the storm were able to begin flying relief missions back into Texas on August 29. Those flights continued for days, even after they began repopulating the offshore rigs, beginning on August 31.

On multiple occasions, helicopter company employees in Louisiana literally went grocery shopping for people in Texas who were safe but otherwise cut off by flood waters. Era crews used an AW139’s large capacity to haul five tons of water bottles, along with enough groceries for a week, to the skeleton crew left behind to care for an ExxonMobil refinery near Beaumont that got isolated by the swollen Neches River. And they got some unexpected, serendipitous volunteer help in doing so.

“We also were repopulating the platforms at that time so a bunch of oil company employees were waiting for flights at our Lake Charles terminal,” White says. “When they saw our people starting to load helicopters with food and water, they just walked out and started to help. We probably had 20 extra people around who could have just sat inside and watched TV, but they came out and pitched in. We loaded those helicopters in record time thanks to them and got that stuff to where it was needed. It was teamwork at its finest.”

The Humane Society also called several helicopter operators, seeking help in locating livestock that were cut off by rising rivers in southeast Texas. As White notes, “Some Army Chinooks were able to come in to drop them bales of hay after we spotted them and reported it. That happened in six to eight locations.”

**Financial Losses**

While no helicopter operators suffered any serious property damage themselves during the storm, Era’s Lake Jackson base was unreachable by car for more than a week because of flood waters, and several bases did suffer minor damages to their hangars and office buildings. Westwind Helicopter’s sales office in Rockport, where the eye of Harvey first made landfall, was obliterated. None of the helicopter operators’ employees or their families were seriously injured, but several saw their homes flooded. Several of those employees continued to work despite their own personal challenges.

While the commercial operators get paid for all their extra flying before and after natural disasters like Harvey, Westwind’s Behne says operators likely don’t do much more than break even on that extra work. This is because of the lost productivity while operations are shut down during the storm, overtime and operating costs, and the cost of any damages sustained to their property.

“It balances out,” Behne says. “Sure, you pick up some extra work during times like these, so I’m sure it helped some on the revenue side. But our costs go up with that too, and then there are a couple of days in there when you can’t operate at all.”

**Pride and Passion**

Despite the financial challenges, these helicopter operators chose to serve their communities with pride. Without their contribution to the search and rescue and relief efforts, many more lives would have been lost. While Hurricane Harvey will be remembered as a devastating natural disaster, the helicopter industry is proud to have flexed its rotors and shown the value it can provide in an emergency.

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Dan Reed is an award-winning journalist who has covered the airline industry, aircraft manufacturing, aviation, aviation safety, and related fields for 29 years, first for the Fort Worth StarTelegram and then for USA Today, where he also served as Texas bureau chief. Now a freelance writer and communications consultant, Reed and his wife are the parents of three adult sons. They live in Fort Worth with Bella, a relentlessly energetic 93-pound Labrador Retriever.

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Your Mission, Our Mission: KEEP THE ROTORS TURNING
Medical Missions in the Wake of Hurricane Harvey

By Shelly A. Schneider

Hurricane Harvey wreaked havoc in the state of Texas when it roared on shore as a Category 4 hurricane on August 25, 2017. According to the National Weather Service, the hurricane and tropical storm caused record flooding in southeast Texas and set a rainfall record for the most rain produced by a tropical weather system in the continental United States, with 49.32 inches of rain observed southeast of Houston.

Harvey also saw a large number of air medical assets deployed to provide access to people in need. There were 54 aircraft sent to Texas from across the United States, and Air Medical Group Holdings, the parent company of Air Evac Lifeteam, sent nearly three-quarters of them. Of those 40 aircraft, Air Evac Lifeteam contributed a total of 16 air medical assets — 14 of which were helicopters.

A Perfect Fit
Because of their ability to lift and land with minimal area, helicopters are the perfect aircraft to respond to critically ill and injured patients affected by natural disasters. Air Evac Lifeteam began preparing for possible deployments months before Harvey or Irma made landfall. Joe Grygiel, senior director of base operations, coordinated the company’s efforts from the O’Fallon, Missouri, national headquarters.

“Because of their maneuverability, helicopters can get to people during a disaster like no other aircraft,” Grygiel says. “Not only were we able to move patients out of flooded areas like Beaumont, Texas, we also picked up physicians in Houston and delivered them to the affected areas. Beaumont was completely surrounded by water, and going by ground was not an option.”

Grygiel is quick to praise the dozens of Air Evac employees and volunteers involved in the Hurricane Harvey response — those on the flight line, those on the ground in Texas providing support, and those in O’Fallon coordinating all aspects of the deployment.

“We knew which bases we wanted
in Texas,” Grygiel says. “Almost immediately, we were overwhelmed with volunteers. After we got through Hurricane Harvey and started watching Hurricane Irma churn a path toward Florida, we had more people emailing, calling, and texting to volunteer. These crews are so selfless.”

Brandi Henson, director of the Air Evac Lifeteam Communications Center, agrees. “To say I’m proud to be a part of that is an understatement. From the flight line to the command post, no one batted an eye when it came time to help. Yes, there were hiccups and challenges, but we made it work. To watch a company that genuinely cares, that wants to do the right thing and do it safely, from the bottom to the top and back again — that is why I love what I do.”

Answering the Call
Crews and aircraft from nine Texas bases responded, along with bases from Alabama, Arkansas, Illinois, Missouri, Oklahoma, and Tennessee. As with every flight, safety was paramount during the air medical response to those affected by Hurricane Harvey.

The crew briefings occurred at the start of each shift, and Grygiel says Air Evac Lifeteam sent two crews with every aircraft. “We doubled everything,” he says. “The maximum anyone could work was 12 hours — even the support staff. Each shift started with a safety briefing. The National Command Center had the ability to view and track our aircraft, as we did.”

Air Evac Lifeteam’s Communications Center employs communications specialists, operations control specialists, and maintenance control specialists. Having all three disciplines in the same room proved to be invaluable during the Hurricane Harvey response because it allowed the specialists to communicate easily with one another to problem-solve more efficiently.

Christopher Lewis, operations control specialist, says Air Evac Lifeteam planned to have a dedicated operations control tier 1 specialist 24 hours per day. These specialists serve as a second set of eyes for the pilots. “This way, we maintained the continuity of contact,” Lewis says.

Challenges
Coming up with a plan to manage more than 50 aircraft was not an easy task. “There was a concentration of aircraft in a smaller area,” Lewis says. “Not to mention the logistics of coordinating forward operating bases, getting aircraft and crews from different parts of the country to Texas and home safely, and using different towers. Our leadership team did an outstanding job both in planning and implementation.”

However, the implementation was not without challenges. Lewis says a lot of the services pilots typically utilize were down. “Sometimes, control towers and radar approaches were either down or operating with limited manpower,” he says. “Established landing zones and helipads were without power or under water.”

Other challenges, according to Grygiel, included logistics such as “where would we get fuel, in what condition would the towers be, or where would we put our crews and get food?” he says. “We knew we could get the people there, but how would we maintain our crews once they arrived?”

Many of the crews that volunteered, however, were not concerned about the logistics. They simply said, “Yes, I will go.” The Harrisburg, Illinois, base sent two full crews, including area pilot John Berezoski. A retired U.S. Army pilot, Berezoski has flown for Air Evac Lifeteam for more than two years.

“Our shift change is at 8:00 a.m., and the program director called my phone at 8:15 a.m.,” Berezoski says.
“I was just coming off the night shift, going through shift change, and briefing the day pilot. I worked with him, and that crew departed around 9:00 a.m.” Berezoski and the second medical crew picked up a rental car and drove to San Antonio.

“As a pilot, you’re thinking, how do I communicate within the Air Evac Lifeteam system? Not being very familiar with Texas, I wondered what our daily load would be, what the traffic volume might be, etc. I will say that it’s amazing how well and how smoothly we aviated and communicated.”

Berezoski says his focus during the Hurricane Harvey response was being more aware in the air. “My responsibility was to see and avoid, knowing the concentration of aircraft was exponentially increased,” he says. “Air Evac Lifeteam has done a tremendous job equipping our aircraft for these types of deployments, especially with ADS-B.”

In April 2017, Air Evac completed installation of the Cobham/HeliSAS Autopilot and Stability Augmentation System and the Garmin 650 and 500H glass cockpits in all of its aircraft. Important for every flight, these upgrades were especially valuable for the Hurricane Harvey response because they increased situational awareness and safety during a time when communications and weather reporting systems were not functioning normally.

Flight nurse Bryanna Johnson says she and her partner, flight paramedic Justin Woodall, helped their pilot listen for traffic and watch for aircraft in the busy airspace. “We watched for military and other aircraft coming in and out of the Beaumont area,” she says. “It was mind-blowing to see all the aircraft coming and going — fixed-wing and rotary-wing.”

A Job Well Done
Air Evac Lifeteam made approximately 300 flights in 12 days in support of Hurricane Harvey relief efforts. The last aircraft returned to its base on Sept. 7.

Just five days later, eight aircraft and crews headed to Florida to provide relief efforts for the victims of Hurricane Irma. The number of people who volunteered for that assignment surpassed the Hurricane Harvey volunteer numbers. Providing access to health care is something pilots, nurses, and paramedics do each day, and they are ready to answer the call when the next natural disaster strikes.

Shelly A. Schneider is the public relations manager for Air Evac Lifeteam, headquartered in O’Fallon, Missouri. She worked in television, radio, and print for more than 20 years before landing the #bestjobever in November 2012. The best part of her job is working with, and learning from, everyone in the company — from communicators to mechanics, nurses and paramedics to medical directors. For more information about Air Evac Lifeteam, please visit Lifeteam.net.
Keeping the Lights On

Every day the world’s power companies rely on helicopters to ensure power reaches their customers. An intricate network of poles and towers, insulators, fuses, transformers, and various voltage power lines—all subject to the elements, nearby vegetation, and extreme weather—require constant attention to keep the electrical current flowing. Often, helicopters offer the most effective, cost-saving solution.

Maintaining Infrastructure

“People don’t realize when they flip that switch, there is a lot of infrastructure out there to make sure the light turns on,” says Dan Arenson, chief pilot at Haverfield Aviation, a utility helicopter operator with more than 35 years of experience providing aerial transmission services. “Vibrations, wind, weather, vegetation—it is all continuously wearing out the infrastructure. It is a constant battle to keep everything updated.”

A pioneer in aerial transmission service to the utility industry, Haverfield is credited with revolutionizing power services by demonstrating how helicopters can efficiently support the transmission grid. Today, the company offers a comprehensive suite of end-to-end aerial services focused on transmission structures and overhead lines with voltages ranging from 69 kV to 765 kV.

With its fleet of 23 MD 500s, a UH-1H, and a UH-60 Black Hawk, Haverfield provides visual inspections, construction support, maintenance, aerial tree trimming, and long-line and live optical ground-wire installations.

In addition to helicopter pilots and crews, Haverfield employs utility experts and equipment able to perform an entire utility construction or repair project, from aerial linemen and ground crews to fuel trucks, rigging, aerial saws, generators, pumps, and presses.

“We’re not your average helicopter utility company,” Arenson says. “We provide the full service and project management. If a utility calls and needs 10,000 insulators replaced on high-voltage towers, we can do all the work, not just fly.”

As infrastructure ages, neighborhoods expand their power requirements, and vegetation grows, there is always work to perform to keep the electrical system up and running. Helicopters provide the ability to quickly assess hundreds of miles of transmission line from the air, as well as replace line and other infrastructure while lines are still live.

“We’re not grounded, so the company doesn’t lose money turning off power while we work from the air,” Arenson explains. “We can also insert linemen on a live line.”

With so much infrastructure in heavily wooded, steep terrain, helicopters’ ability to cross hard-to-access locations adds value by reducing the cost of clearing land and bringing in ground crews, Arenson adds.

Haverfield also supports vegetation control. With its aerial saw, the company can quickly access remote and hazardous terrain, cutting branches and vegetation clear of transmission lines.

“Vegetation is always growing and is a continual threat,” Arenson says. “The big blackout in New York in August 2003 was caused by an overgrown tree that hit the power line. Once the line went down, a series of switching issues took place, basically snowballing in a time of high power demand and causing the blackout. Vegetation is one of the largest causes of power loss, especially in storms.”

Storm Response

Through its daily work and experience with utilities across the United States, Haverfield can come in at a moment’s notice to assist in post-disaster situations that adversely affect power supplies.

“When a power company loses the ability to get electricity to its customers, it’s losing money,” Arenson explains. “Whether with their own
insurance or federal funds if they’re involved, they’ll move quick to request help in getting power back online. Sometimes that means they’re asking us to fly down in advance, out of the path of a storm, and stand by to jump in as soon as the storm passes.”

This was the case for Haverfield when Hurricane Irma hit Florida in September. Haverfield flew a helicopter to Tallahassee to position for post-storm work. Once the hurricane passed, Haverfield repositioned to Leesburg, northwest of Orlando, to begin flying assessment work for Duke Energy.

“Typically, we’re initially asked to fly the lines, looking for downed lines and assessing their accessibility,” Arenson says. “More than anything, about 90 percent of the time, the cause is downed trees that brought down a power line, and most of them are the shorter, low-voltage lines that are easily accessed by ground crews for repair. “We will sometimes find downed lines in areas hard to access by trucks and ground crews, such as over rivers and high ravines, or where the whole base is washed out by flooding. In those cases, we’ll assist with repair,” he says. “In the case of Irma, we only flew assessment. The main thing is to get the power back up, and we help by quickly identifying where the damage is so the repair work can start.”

Arenson explained it is rare to have the taller, higher voltage power lines severely damaged in hurricanes as they’re higher off the ground and not as susceptible to downed trees. However, it does happen.

After Hurricane Harvey hit Texas in August, Haverfield flew down to support American Electric Power, performing long-line work, flying in wooden and metal poles to rebuild transmission lines.

After Hurricane Sandy in 2012, Haverfield flew a great deal of assessment and rebuilding work for National Grid in New York, Arenson says. The company flew patrols, pulled sock line (using helicopters to pull electricity-conducting wires into place on a tower), and replaced insulators.

“Helicopters are not just important to the power grid in storms, they’re important year-round,” Arenson says. “A lot of utilities see the value of having helicopters to support their systems. They’re a great value for assessing and maintaining, and can get work done faster, especially in critical times after a disaster. Helicopters play a big part in keeping the electrical grid working and reliable.”

Jen Boyer is a 20-year journalism and public relations professional in the aviation industry, having worked for flight schools, OEMs, and operators. She also holds a rotorcraft commercial instrument license with flight instructor and instrument instructor ratings. Boyer currently runs her own public relations and communications firm and freelances regularly for aerospace companies and publications. She can be reached at jen@theflyingpenguinpr.com.
Not Just a Job for First Responders
To Protect and Serve

By Tim Kern

“Nobody had ever heard of Harris County until Hurricane Harvey hit,” says Lt. Don E. Plant Jr., Homeland Security Command tactical response commander and chief pilot. The county encompasses all of Houston and its suburbs, home to 4.5 million people.

“Well, they have heard of us now,” Plant says, commenting on the area’s rotorcraft operators and their spirited response to the record-breaking storm. “Sheriff Ed Gonzales managed dozens of governmental units and organizations, plus hundreds of volunteers. There was great support from some of the commercial operators, as well.”

Similar stories emerged in the aftermath of Hurricanes Irma and Maria, where first responders also saved people, property, and pets — and again, rotorcraft made it possible.

Hurricane Harvey’s geography and population impact were the largest of the three hurricanes, and because that storm hit first, its story is the soonest available. Some of Harvey’s stories, typical of the quiet heroism that happens out of the spotlight, are chronicled here.

Local Expertise
Harris County covers 1,777 square miles and has more than 4 million inhabitants, of which 656 square miles and half the population are in Houston proper. Southwest of Houston is Fort Bend County, which covers 855 square miles and is home to another 750,000 people. To the northeast are Jefferson County’s 250,000 residents and its largest city, Beaumont (population 120,000). All these areas, and more, were devastated by Hurricane Harvey.

Chief Pilot Kyle Evans of the Fort Bend County Sheriff’s Office Air Support Division has flown in this area for 33 years. “We get into the air as much as we can,” he says. “It’s up to the availability of personnel and equipment, as much as they need. We perform the usual police operation functions such as looking for missing persons or suspects and helping direct ground operations; it’s primarily observation.”
In addition to Evans, the Air Support Division is made up of Deputies Michael Deutsch and Mark Foster, and Officer Tim Edison of the Sugar Land Police Department. “Without those guys, the Fort Bend Air Support Unit could not have provided the level of help and support to the visiting helicopter units. They are a great bunch of guys that will help at any time. They make us all look good,” said Evans.

Like so many things, a disaster looks different on television. “We would fly people from the command staff and drainage departments to give them a firsthand perspective of the devastation,” Evans says. “It looks different from the sky — there’s water in every direction.”

Fort Bend County’s Bell OH-58 Kiowas aren’t suitable for lift work. “Fortunately, with Harvey, we didn’t have to do any lift work,” Evans says, because other helicopter units were deployed for that purpose. What the Kiowa is best at, in civilian as well as its military role, is observation.

“We would get a report of a submerged car, or we’d find one. Then we’d help rescuers get to it. We looked for the best ways in and out, to help stranded victims, and to find people who needed to be evacuated,” he says. “Just being overhead, we helped deter the criminal element.”

The fact that Evans is a native Houstonian with more than 40 years of law enforcement experience in the area was invaluable to the volunteers and other units that responded to the Houston area in the immediate aftermath of Hurricane Harvey.

“We had maybe a dozen helicopters respond very early, including the U.S. Coast Guard, the Texas Parks and Wildlife Department, the Texas Department of Public Safety, and U.S. Customs and Border Protection,” Evans says. “These crews weren’t familiar with local airports or local airspace. We spent a lot of time helping them keep their hoist operations going.

“Their smartphone GPS systems and apps didn’t help with the TFRs and other airspace,” says Evans. “Some had minor maintenance problems. My guys and I helped them work out those problems, got their aircraft to the right people, and got them the right equipment. Private operators showed up, offered their time, and offered their machines.”

It wasn’t long before the Texas Air National Guard (TXANG) came in, and the 36th Combat Aviation Brigade arrived. “They were from 10 different states. Lt. Col. Jose Reyes of the TXANG did a fantastic job,” says Evans. “There were no incidents, no hurt feelings. When you get all these Type A personalities together, then add a crisis and hot rainy weather, it can cause a difficult working environment. But Reyes did a fantastic job.”

When the chips are down, everybody’s your neighbor. “Everyone was willing to help,” Evans says. “Without them, we’d still be looking for people. We reciprocate, too. Our agency aircraft are available to
anybody in the county, even outside the county, if they need them.”

They spent the days in their leaky hangars, waiting for crews to need something. And even the local residents came to help. “The people from TXANG were astonished at the locals’ generosity,” Evans says. “They brought us water and snacks. A couple days, I’d run until I needed fuel, and didn’t even get out of the helicopter. Lots of guys worked like that.”

Evans was surprised by everyone’s positive attitude. “Nobody complained, even when I was cranky. Anything you asked them to do, they did. If you have to respond to a [horrible] event, it’s good to be surrounded by excellent people.”

Unique Missions
Evans gave some other examples of how helicopters saved the day, in addition to saving human lives. “It’s hard to get your head wrapped around how many things got done,” he says.

“Over in Jefferson County, there were hundreds of cows on little islands created by the flood, stranded with no feed. The U.S. Army showed up with Chinooks, flew out to these cows, and dropped them some hay.”

These are the types of things you just can’t do with an airplane. “And you can’t hoist people into an airplane, either,” Evans says.

Disaster — necessity — spurs accommodation. “They were using dump trucks and boats to rescue people. But a person who’s really sick shouldn’t be bouncing around for an hour trying to get to a hospital. You can’t do that type of mission with a school bus — ‘Here, hold your IV bag while we drive through the flood’ — they won’t make it in a wheeled vehicle. The only solution is a helicopter.”

Some new equipment helped, too. “Before the equipment upgrade, we would be assigned a location, an intersection, or an address,” Evans says. “This year, we had Churchill Navigation. With the new mapping, we could find streets that weren’t even visible before. We could never have found addresses when the water was up to the eaves of the roof. So if somebody called from their attic, I could direct a boat with a chop saw right to their house to get them out.”

Expansive Devastation
Sgt. Kurt M. Overby, a pilot with the Houston Police Department’s Homeland Security Command Air Support Division, noted that early estimates in Texas showed that Hurricane Harvey put more than 500,000 vehicles under water, causing roughly $180 billion in property damage.

Repairs and lessons learned from Tropical Storm Allison in June 2001 helped save public buildings during Harvey. “The bottom of the Texas Medical Center went underwater in 2001, knocking out power and destroying records,” Overby says. “In the rebuild, they installed these huge flood doors, like the locks on a canal, and most everything stayed dry. They had little damage this time in the
Theater District, which was devastated by Tropical Storm Allison’s flooding. They learned. We’ll learn from this, too.”

Houston Police Department Chief Pilot and CFII Larry Kroesche concurred. “They’re now looking at some mandatory buyouts in the floodplain,” he said. “They can’t just keep building there and then getting flooded.”

Kroesche and Overby have nine helicopters — eight MD 500s and a Bell 412EP — that can be equipped with a hoist, a bucket, or other equipment. “We use [the Bell] for everything from observation to SWAT deployment. Usually, it’s set up for search and rescue. But when Harvey hit, our mission changed as conditions dictated,” Kroesche says.

“We did assessment flights with the chief of police and mayor. Houston Fire Department technical rescue specialists were on board the Bell 412EP as part of the search and rescue crew. We flew a lot of assessment flights to determine where to put boats in, where people needed help, or where rescue from rooftops or balconies was required.”

The Houston Police Department Air Support hangar acted as a distribution hub for relief efforts for the far-eastern Texas counties. Overby was grateful that the military brought in some heavies, as well. “Six Chinook and three Black Hawk helicopters loaded there with supplies and food and flew to football stadiums in the affected areas,” he says.

Giving Relief to the Relievers

“Some of the air traffic control personnel at Hobby and Intercontinental [airports] had been on duty for 48 hours. They couldn’t get relieved,” Kroesche says. “We picked up their relief and got the exhausted controllers out. Aircrews all over town couldn’t get to their ships. We brought them to work. Luckily, our helicopters were in just a little water. Skids were covered. But crews couldn’t get to the roads to the airport or out of their neighborhoods.”

The communications controls were thought to be secured well outside of town, but it was found that the communications hub was taking on water and a crucial key was needed to get the generator up and running to secure comms for the entire county. Overby explains, “The flight crew of the Bell 412EP flew into our command and delivered the key technical personnel who were able to keep the comms up and running. We would have lost all command in 30 more minutes.”

As the initial rain let up, criminals came out. “No police force can handle all the looting, plus all the other things a police department has to do in an emergency,” Kroesche says. “We flew several federal agents along with a constable to various spots in the flooded Beaumont, Port Arthur, and Silsbee areas to swear in approximately 50 federal agents as local law enforcement.”

Kroesche praised the hordes of volunteers. “They came from everywhere — a former Army ranger and three of his ranger buddies (one with a combat amputation to his leg) came from Tennessee, hundreds of boats from even a thousand miles away — everybody came to help. And of course, we had to know what to do with them all. The military operations were controlled from AWACS [a Boeing 707 equipped as an airborne warning and control system]; we coordinated through the Coast Guard as they talked to the guys overhead.”

Overall, Kroesche says, “We learned a lot. We had warning, sure, but nobody can be ready for four or five feet of rain in one day’s time. It was a logistical nightmare, but it actually worked pretty smoothly. Recovery will take a year or more, but we’ll come back. The people here, they’re resilient.”

Citizens’ Responses

Harold “Ed” Aycock was watching the local news of Hurricane Harvey. They were showing the unbelievable devastation from wind damage, tornados, and a year’s worth of extremely heavy rain in a couple days. Aycock says, “There were cars completely submerged, houses with water up the roof, and people being boated and rescued out of deep flood waters, carrying only a few essential items of value they could grab before being evacuated,” Aycock says.

He didn’t wait to be asked to help. “As a professional pilot, I knew I could make a contribution to aerial efforts,” Aycock says. “I called my boss, Russell Gordy, and asked permission
to use his helicopter. Without hesitation, he said, ‘Absolutely, but be careful.’ He also wanted me to spread the word that his gun store, Gordy and Sons, had 100 pairs of duck hip waders he wanted to give to first responders.”

Gordy says, “These are our people. It was a horrible time for Houston, and we wanted to do whatever we could. Ed volunteered to fly; we were happy to volunteer the helicopter.”

A couple long days passed before Aycock could navigate flooded roads to reach Gordy’s R44 at David Wayne Hooks Memorial Airport (KDWH), located in Tomball, 23 miles north of Houston. His wife, Tiffany, accompanied him, managing planning and logistics. “We were ready to pitch in any way we could,” says Aycock. “We called the Red Cross, FEMA, and several local agencies. But we got the same answer: ‘We would love you to help, we just do not know how right now.’”

The Aycocks continued to the airport, determined to help. “As we pulled into the airport, I flagged down the Harris County Air Support deputies and a Tomball police officer and asked if anyone needed a helicopter. The Tomball PD officer spoke up that they did need help, and I said, ‘Let’s go.’”

Lt. Plant from the Harris County Sheriff’s Office assigned Aycock to assist the city of Tomball and multiple locations throughout Harris County. “The next several days were some of the most rewarding and heartbreaking days I have experienced in my 15 years of flying,” says Plant. “Rewarding because I positively contributed to people in need, but heartbreaking, seeing all the devastation up close and personal.”

Aycock’s flying included anything and everything. “The missions varied so much from day to day, you truly could not make a plan of action; more a plan of reaction. If my phone rang and someone needed help, I flew, and for the most part it did not matter what it was,” he says. “There were times that I was flying county and city officials to survey storm and flood damage, transferring people from shelters to medical facilities, or just getting people close enough to their house to get pets that were left behind.

“The Harris County Air Support did an amazing job of distributing supplies to victims, such as pallets of water, food, clothes, and dog and cat food,” Aycock says. “They had 3,000 pounds of insulin that needed to be delivered to a hospital in need. These items were crucial, especially since the water supply in Jefferson County was destroyed by flooding and no running water was available for weeks.

“On Labor Day morning I received a call from Chaz with the Cajun Navy,” Aycock continues. “The Port Arthur Police Department needed supplies to help with their recovery but were not able to get to them from Houston because I-10 was impassable.

“People were flying before the hurricane had even moved off to the east, landing in places in and around Houston you never thought you would, all the while dealing, working a temporary flight restriction,” Aycock says. His plan: “All the TFRs became complicated, so I referred the gentlemen to Lt. Plant to handle.”

Aycock says he made many memories in the wake of the disaster. “Hurricane Harvey was devastating in so many ways, but it seemed to bring the best out in almost everyone. It showed people helping one another, people they had never met and will most likely never see again.”

Aycock saw a need, had the tools, and stepped up, as did many volunteers whose stories may never be told.

“I for one feel very blessed to have been able to help in ways others could not,” Aycock says. “Not everyone can fly a helicopter, and in times like these, it was an invaluable tool. In the end, it all came down to helping people that needed it. No money. No politics. Just helping people.”

Tim Kern is an aviation writer whose work has appeared in more than 50 aviation publications. He is a private pilot and holds an MBA in finance and operations from Northwestern University. He has extensive experience in machining and both motorcycle and auto racing, and was CEO of an airplane engine company in the early 1990s. Kern is the only journalist to complete the ALEA Accident Investigation course or to have earned NBAA’s CAM (Certified Aviation Manager) certification.
BOLD IDEAS, BRIGHT FUTURE

“HAI HELI-EXPO® provides me with the opportunity for networking with key persons in the industry, and the exhibits, meetings, and education ensure that my company keeps up with new technology and updates in the industry.”
Hurricane Irma was on the way. Since August 30, the hurricane had been watched by meteorologists — and eventually the entire region — as it tore through the Caribbean. Eventually, it became clear that the powerful storm was headed for Florida. Rick Scott, the governor of Florida, declared a state of emergency on September 4. While Florida residents had a few days to prepare (Irma didn’t touch down there until September 10), first responders knew they needed a location where they could safely shelter during the hurricane.

The solution: the Orange County Convention Center (OCCC). The second largest convention center in the United States (behind McCormick Place in Chicago), the OCCC is located in Orlando. Unlike coastal cities, Orlando’s central location insulated it from the worst of Irma, while also making it an ideal location to depart from for any post-Irma operations.

According to Tim Wood, OCCC security manager, the convention center was a logical staging location. “As a major event destination, our teams are accustomed to moving and staging large equipment, ranging from helicopters and airplanes to trucks and roller coasters.”

If you attended HAI HELI-EXPO 2015, you’ve been to the OCCC. So it’s no surprise that it had room to house 34 aircraft during Irma; after all, 57 aircraft were on display there in 2015. Wood had been getting calls from various agencies about a week before Irma was due to make landfall. The convention center had been used for similar staging during previous storms, but OCCC personnel say this was one of their larger efforts.

The convention center had seven shows scheduled in the 10-day window leading to and during the hurricane. However, as it became obvious that Hurricane Irma posed a real threat to the area, the OCCC worked with its clients to reschedule those events, freeing up the convention center to stage the aircraft.

Just as they did for HAI HELI-EXPO 2015, aircraft were able to land in a parking lot of the OCCC North Concourse. Aircraft were then either pushed or towed into Hall B of the North Concourse. When aircraft are being exhibited, the OCCC normally imposes fuel limits as a safety precaution. However, considering the circumstances, the convention center suspended its fuel limits, in part to ensure that the responders could begin mission operations as quickly as possible.
quickly as possible.
Aircraft started arriving late in the week before Hurricane Irma arrived. Once inside, the aircraft stayed put until it was safe to return to operations after the storm had passed.

As it passed through the area, Irma delivered sustained winds of 56 miles per hour, sufficient to down trees and cause other property damage. Although the *Orlando Sentinel* reported that more than 80 percent of Duke Energy’s customers were without power, the OCCC never lost power (and if it had, the facility has several back-up generators).

The OCCC put together a “ride-out” team of staff members who stayed in the convention center to monitor the building and assess for any damage. A limited number of first responders and crewmembers were permitted to stay as well so they could be in place to respond quickly.

The aircraft and personnel spent four to six days in the OCCC, but it wasn’t all downtime. Some responders sorted and dried supplies that were still wet from their work in Texas, coping with the damage caused by Hurricane Harvey.

According to Wood, if the U.S. Air Force could not have staged its six Black Hawks from the convention center, the aircraft would have been forced to operate from Georgia, greatly increasing their potential response time.

“We know the Orange County Convention Center is a premiere destination for the trade shows and conventions industry,” says Kathie Canning, OCCC executive director. “But we love that our space has the adaptability to be used in real times of need. We are absolutely a community asset and were happy to showcase that in our efforts during Hurricane Irma.”

Gina Kvitkovich is HAI’s director of publications and media.
Are You Ready to Help Yourself?
Disaster Preparedness for Small Businesses
By Eric Giltner

Today’s headlines inform us of disasters of many types and sizes. The United States, Mexico, and its Caribbean neighbors have been struck with multiple hurricanes in recent months, causing immeasurable harm to people, property, and local economies. Wildfires and earthquakes all over the world are disrupting entire communities, and for many, months will pass before some semblance of normalcy returns.

These events affect large areas, but localized disasters can be just as devastating. Fires, cybersecurity attacks, electrical storms, blizzards, flash floods, malicious acts, and vehicle accidents can impact the bottom line of businesses in a variety of ways.

Helicopter operators are often the people who put out the fires and respond to disasters. But what are you doing to protect your own business from even a minor disaster?

An estimated 25 percent of businesses that close because of a disaster never reopen, according to the Institute for Business and Home Safety. Small businesses are especially at risk because few have the resources to assess their risks and develop recovery plans for the future.

As part of its mission to help small businesses to start, grow, and succeed, the U.S. Small Business Administration can help when it comes to disaster preparedness and recovery. Start with these seven simple tips:

Evaluate Your Exposure
Know your region and the types of disasters most likely to impact your business. Consider your facility’s proximity to floodplains, wildfire areas, rivers and streams, dams, nuclear power plants, and other hazards.

Review Your Insurance Coverage
Now is the time to consult your insurance agent to determine whether your coverage is sufficient. Make sure you understand what’s covered by your policy, and determine if you need flood insurance. Remember, many general policies do not cover flood damage.

Check into business interruption insurance, which helps you cover operating expenses if you’re forced to temporarily close. Calculate the cost of business interruptions for a day, week, month, or more. To the extent possible, set aside a cash reserve that will allow your company to function during the recovery phase.

Review and Prepare Your Supply Chain
Develop professional relationships with alternate vendors, in case your primary supplier isn’t available. Place occasional orders with them so they’ll regard you as an active customer.

Create a Crisis Communications Plan
Try to make sure your staff, customers, vendors, contractors — everyone you do business with — know what’s going on in the aftermath of a disaster. Establish email and cell phone alert systems, and maintain an up-to-date list of the phone numbers and primary and secondary email addresses for your employees, vendors, and customers.

Provide real-time updates to your customers and clients and the community so they know you’re still in business and in the process of rebuilding after the disaster. Don’t forget to test your plan beforehand.

Establish Business Procedures
Let your employees know the emergency chain of command. Maintain a clear leave and sick-day policy during disasters. Have a backup payroll service, should your office be destroyed.
Safeguard Important Information

If your main business location is destroyed, having key information stored off-site in another physical location or the cloud will allow for a faster continuation of business activities. Information on customers, employees, vendors, and financial and logistics systems are needed to resume operations in a timely fashion.

An estimated 25 percent of businesses that close because of a disaster never reopen.

Create and Implement a Business Continuity Plan

This plan will help keep your business operating as it responds and recovers from a disaster or emergency situation. This plan should do the following:
- Indicate when it will be activated
- Identify essential business functions and staff to carry out these functions
- Determine which employees will be considered nonessential vs. essential
- Identify records and documents that must be safe and readily accessible to perform key functions.

Developing an effective and workable disaster preparedness plan is critical for all small business owners. For helpful checklists and more information on disaster recovery planning, visit http://bit.ly/sba-recover.

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Eric Giltner has been a business development specialist and the Grand Forks area manager for the U.S. Small Business Administration since 1998, having formerly been assistant to the dean of the University of North Dakota College of Business and Public Administration. He received his B.S. degree in geological engineering and his master’s degree in business administration from the University of North Dakota. Eric can be reached at eric.giltner@sba.gov.

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Most of New Zealand was asleep in the early morning of November 14, 2016, when a 7.8 magnitude earthquake centered near Kaikoura struck. By daylight, the largest air bridge operation in New Zealand's history was under way to assess the damage, bring relief, and start the recovery.

The Earthquake’s Impact
According to GNS Science, more than 21 faults were ruptured in that initial shake, possibly a world record for the number of faults rupturing in a single earthquake. Significant aftershocks, many more than 6.0 in magnitude, continued for many months.

The initial shock caused the most damage with two fatalities and 56 injuries. State Highway 1, the main north-south road, and the main railway line were severed by multiple landslides on both sides of Kaikoura. Many roads and bridges throughout the area were cracked. Water treatment, fresh water, telecommunications, and power generation facilities were damaged and stopped operating. Approximately 150 landslide dams were created across multiple South Island catchments.

A local tsunami saw wave run-up on shore as high as 22 feet above sea level in Goose Bay, and a 9-to-13-foot run-up in other areas. Luckily, the earthquake struck at low tide and much of the foreshore was lifted by more than 3 feet, so the impact was not as great. However, the rise in seabed placed significant restrictions on the small harbor.

Kaikoura, with its population of 2,080 (3,740 in the Kaikoura District) and around 1,000 tourists, was cut off, and many small settlements in the area were isolated. The adjacent Hurunui District (population 11,529) was also affected. These districts are on the northeastern side of the South Island of New Zealand. Given the severity of the earthquake and the damage, one would expect the numbers of fatalities and injuries to be high. However, because of the small population and the quality of New Zealand’s building standards, the effects were comparatively mild.

The earthquake was felt throughout a good part of New Zealand, with considerable damage in other places, including the capital city of Wellington. However, the Kaikoura and Hurunui districts required the most aerial effort.

The Response
The immediate daylight response came from the air. Christchurch Helicopters landed urban search and rescue teams on behalf of the New Zealand Ministry of Civil Defence and Emergency Management (New Zealand Civil Defence) shortly after 6:00 a.m. in Kaikoura. Other commercial operators were quickly on the scene too. Two defense NHIndustries NH90 helicopters and a Lockheed P-3 Orion surveyed the damage. “It is clear that the major route from Christchurch to Kaikoura is impassable. So are the roads from Kaikoura to Hanmer Springs and the one from Blenheim to Kaikoura,” Air Cdre. Darryn Webb, acting commander of Joint Forces New Zealand said on November 14.

Several helicopter companies quickly had aircraft on the ground in Kaikoura ready to help and do what was required. When the magnitude of the damage became clear, New Zealand Civil Defence recognized that a coordinated air program would be required to bring in essential supplies, evacuate tourists stranded in Kaikoura, and assist local residents who wanted to leave and begin the recovery program. Many different helicopters operating independently could pose a safety hazard, and would not be in Kaikoura’s best interest.

Organizing Relief and Recovery
Kaikoura Aerodrome, about 4.5 miles from Kaikoura, has an asphalt runway that is 2,294 feet by 33 feet and a grass runway that is 2,018 feet by 82 feet.
While undamaged, the helicopter option allowed landings in a field near the hospital and the local rugby ground. As the operation got into full swing and an ordered approach was taken, operations focused on the rugby ground. The aerodrome was used later in the week when fixed-wing flights started.

The organization of the relief and recovery reflected work among New Zealand Civil Defence, the New Zealand Defence Force, and a Christchurch Helicopters consortium. They soon became the key players.

Christchurch Helicopters, working collaboratively with Wanaka Helicopters, Tekapo Helicopters, Advanced Flight, and Kaikoura Helicopters, established a base in Kaikoura. Christchurch Helicopters supervised the movement of helicopters for New Zealand Civil Defence, which included New Zealand Urban Search and Rescue, New Zealand Police, the Canterbury District Health Board, Christchurch City Council, the Environment Canterbury Regional Council, and other agencies and companies involved in providing relief and starting the recovery.

The helicopter companies transferred some of their resources to the Christchurch Helicopters base in Christchurch so that all the aircraft could be maintained and operated for as long as was needed. To further improve the efficiency of the operation, Christchurch Helicopters based one of its staff in the New Zealand Civil Defence office in Christchurch. This enhanced coordination of helicopter missions and ensured tasks requested of the helicopters were practical and achievable.

As a result of the close relationship with New Zealand Civil Defence, logistics planners were able to work late into each night to task the helicopters for the following day. Even the student pilots at Christchurch Helicopters pitched in to ensure that aircraft were always clean and tidy.

Cooperation between the helicopter companies was also helped by the relationships and rapport between them. Wanaka Helicopters and Christchurch Helicopters both train new helicopter pilots. As it happened, pilots trained by both companies were flying for Tekapo Helicopters, Advanced Flight, and Kaikoura Helicopters. Both training companies are separately working on an initiative to further improve the quality of training delivered to prospective pilots.

Those initial helicopter flights brought in much-needed supplies of food and water, as well as generators to get power up and running to pump fuel, run dairy platforms, and other essential services. They also brought in vital chemotherapy drugs for cancer patients in Kaikoura and other pharmaceuticals. Christchurch Helicopters provided humanitarian missions for no Earthquake Response by the Numbers

- Nov. 21, 2016, was a record day for the Christchurch Helicopters consortium, when eight helicopters flew a total of 45 hours
- Four NHIndustries NH90 RNZAF flew 122 hours and delivered 25 tons of aid
- Two AgustaWestland A109 helicopters flew a total of 23 hours
- More than 2,000 people were evacuated in the week after the earthquake
- Royal New Zealand Navy ships rescued 640 people (450 on the Tuesday alone), one cat, 17 dogs, and 30,000 bees

The 7.8 magnitude earthquake was powerful enough to bend rail lines, as this Christchurch team discovered during their inspection.
payment. One such mission was to fly a plumber to an isolated farmhouse where a young mother, stranded with her baby, had no water or sewage supply.

The Royal New Zealand Airforce (RNZAF) played an important role in providing relief and then in the recovery. RNZAF provided four NHIndustries NH90s, two AugustaWestland A109s, and two Sikorsky S-70B Seahawks. It also accessed helicopters from the Australian, Canadian, and U.S. air forces, which were on exercises near New Zealand at the time of the earthquake.

The relief and evacuation process ramped up very quickly, showing what could be done with a coordinated defense-civilian approach. The day after the earthquake, the four NH90 helicopters delivered 1.3 tons of water, 660 pounds of food, and jerrycans of diesel, in addition to picking up 200 evacuees. By Wednesday, New Zealand naval ships had arrived to complement the helicopter effort, and a truck convoy got through on Friday.

The ability to quickly complement the air effort with sea and land support from the navy and army meant that significant progress was possible very quickly. The ships and trucks collectively delivered 283 tons of necessary supplies and repair equipment, compared with the 25 tons the RNZAF delivered through its helicopters.

**Supporting the People**

Where to take evacuees was not really an issue. The RNZAF and civilian helicopter operators flew passengers to Woodend, 16 miles north of Christchurch. Many were flown back to the Christchurch Helicopters base at Christchurch Airport. Support services then took over.

“We managed to move a lot of people very, very quickly. On Tuesday, we shifted about 300 people,” says Pete Spencer-Bower, Wanaka Helicopters managing director, speaking about the service provided by the Christchurch Helicopters’ consortium.

Even the Chinese government stepped in to help its citizens. In a little more than 24 hours after the earthquake, 125 stranded Chinese tourists were evacuated from Kaikoura. The consortium of helicopters from Christchurch Helicopters flew many trips during Monday and Tuesday to achieve this task.

Many stranded tourists spoke of the generosity of locals before they were evacuated and the treatment they received when flown to safety. They were willingly accommodated on maraes (communal place for Maori, the native population of New Zealand), in churches, in halls, and in local homes undamaged by the earthquake. The Takahanga Marae, for example, supplied 1.5 tons of crayfish to stranded tourists for breakfast one day.

**Lessons Learned**

One valuable lesson was how necessary an immediate response to assess the damage and people’s needs was. This got under way at daylight on the first day after the earthquake. “Urgent short-term needs assessments [were] made and they [were] being catered to through those helicopter drops,” says David Coetzee, national controller, New Zealand Ministry of Civil Defence and Emergency Management.

In an emergency, people are generally willing to help, provided they are given clear direction as to what is required. “We’re here to offer any kind of support we can,” says Cmdr. Tim LaBenz of the USS Sampson, which provided two MH-60 Seahawk helicopters. “We’re proud to be part of a broader effort to bring some relief and help those affected by tragedy.”

Coordination of effort is critically important. Basing a Christchurch Helicopters’ employee in Civil Defence improved communication and ensured helicopters were properly utilized in the first days after the earthquake. Good coordination between defense and civilian resources is essential.

“We were really honored to be asked to help and get involved in real-world operations to help the people,” says Lt. Ariel Baltis, captain of a U.S. Navy P-3C Orion.

John Nicholson joined industry association Aviation New Zealand in February 2008 and was appointed chief executive in April 2016. Before that, he had several international business development roles at the senior management level with New Zealand Trade and Enterprise and predecessor organizations in Australia, Britain, and Singapore.
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In 1995, 16 percent of the U.S. Forest Service’s (USFS) annual appropriated budget was dedicated to fighting wildfires. Only 10 years later in 2015, that percentage had increased to 50.

In 2016, firefighting consumed more than half of the agency’s annual budget. At this rate of increase, paired with reductions in nonfire personnel, the USFS estimated in its 2015 report, *The Rising Cost of Wildfire Operations: Effects on the Forest Service’s Non-Fire Work*, that by 2025, the percentage of annual budget spent on firefighting could be as much as 67 percent.

As wildfires become hotter, larger, and more difficult to control, and the fire season in North America begins to exceed 300 days per year, firefighters are taking advantage of innovations — from technology and chemicals to techniques and strategies — to cope.

**Seeing in the Dark**

Traditionally, aerial firefighting is available only during daylight hours and when visibility and meteorological conditions around the fire allow. This sometimes limits air support to eight hours or fewer per day.

However, at night, wind speeds and temperatures decrease while humidity becomes relatively higher, providing an optimal opportunity to tactically battle fires.

Night-vision goggles (NVGs) are the first line of night defense for some agencies. Successfully used to fight fires for more than 40 years, NVGs are mainly put to work at local and state levels in high-population areas.

The USFS had moved away from them not long after an NVG-related accident in the late 70s. However, recent increases in forest fires, innovations in firefighting techniques, and significant innovations in NVG technology have slowly begun opening doors to NVG use again on USFS contracts, starting with a contract in 2012.

“Firefighting with NVG has been around since the 70s using second-generation goggles,” says Kim Harris, director of business development and sales at ASU Inc., a leading provider of portable NVGs. “In southern California with its high population,
there was significant pressure to allow night flying, and agencies there have become very experienced with NVGs. While it’s not an innovation per se overall, the USFS slowly building back NVG use on big fires is a change that has the potential to make a significant difference.”

As more agencies begin to use NVGs, the technology is changing. NVGs traditionally provide a green-phosphor view. Today, a new white-phosphor option is making waves.

“Our eyes have rod cells and red, green, and blue cone cells,” Harris explains. “Green phosphor is only detected by our green cone cells. However, white phosphor is detected by rod cells and all three types of cone cells, increasing our brains’ response time in understanding what they’re seeing. The human brain simply processes the image faster, reducing potential confusion. It’s kind of the difference between dial-up and fiber optics, and we’ve had some very positive feedback from the field.”

At the Los Angeles County Fire Department, NVG operations have been in effect for years and remain a primary system for the department. However, innovations to further enhance night and low-visibility operations are on the horizon, such as enhanced visual systems (EVS), which offer a head-up or multisystem display to offer pilots strong situational awareness.

“EVS installed on aircraft would be a big jump for nighttime operations,” says L.A. County Fire Senior Pilot Tom Short. “It would be an aid to the pilot, offering the ability to see terrain on the display and goggle images. For instance, an obstacle to vision with NVGs, like smoke, is overseen by the EVS. I think these systems would be extremely valuable to nighttime and low-visibility fire operations.”

Another valuable tool L.A. County is actively researching is the addition of infrared (IR) sensors on helicopters. The department’s two new Sikorsky S-70i Firehawks currently on order have the capability to include IR, and the agency is researching suppliers, Short says.

“Law enforcement has used this technology for years, but it’s not common on helicopters for firefighting,” Short says. “Our operations are unique because we’re set up for multimissions. We could do a water drop, return to extract a crew or injured person, head out to perform a rescue with a hoist, then be back to doing another drop.

“We do a lot of searches, and unless the person we’re looking for has a flashlight or a cell phone that still has battery life, they’re really hard to see with NVG,” he says. “The addition of IR would be a significant help in rescue as well as seeing hot spots, fire lines, and even the location of our fire crews clearly.”

**New Drop Chemicals Make an Impact**

Innovations in fire suppressant and retardants are also making a splash, so to speak. Offerings for what helicopters and airplanes can drop...
on fires are somewhat limited, with water, foam, and the traditional red Phos-Chek retardant being the most common options. However, gel is beginning to gain popularity.

Currently, the U.S. government has a long-term contract for using Phos-Chek, a mixture of 85 percent water; 10 percent ammonium phosphate fertilizer (a salt); and five percent dyes, anticorrosives, stabilizers, and bactericides. It must be dropped in advance of a fire to hinder the fire’s progression. The chemical is mixed in advance and is either pumped into aircraft tanks or can be dipped or snorkeled out of a tank. Phos-Chek has recently come under scrutiny for being lethal to aquatic life and harmful to vegetation in drought-ridden areas where rain has not been present to wash off the chemicals.

Foam is the choice of many agencies on the fly as it can be directly added to water in an aircraft’s tanks and mixed using the aircraft’s movement and vibrations. L.A. County prefers this solution because of the multimission needs of its operations.

“Other solutions require a team to come set up a tank and perform mixing, which really means you aren’t using it until Day 2,” Short says.

A new product taking hold on the local and state levels is gel. This more environmentally friendly option is marketed as the middle ground between foam and Phos-Chek. While gel must be mixed with water (much like retardant), it doesn’t aerosolize during a drop like Phos-Chek and foam can. Gel can be used both during the fire to suppress, or ahead of it to retard.

Gel products also aren’t required to adhere to rules surrounding use near water sources or sensitive areas. They are lighter than Phos-Chek — gel weighs about 1/10 of a pound per gallon versus Phos-Chek, which weighs about one pound per gallon.

“State and Canadian provincial agencies use our product and have realized significant cost savings,” says Matt Struzziero, vice president of GelTEch Solutions, a manufacturer of a firefighting gel called FireIce. “It’s lighter, allowing for more payload, and significantly less expensive, about one-third the price of long-term retardant. Because it comes dry in buckets, it can be easily moved to staging locations, even in the aircraft.”

FireIce basically works as a blanket on combustible material, keeping the water on top of the fuel and adhering to it, limiting evaporation.

No matter what firefighting product is used, there’s no question about the need for more of it to combat some of the larger fires. Luckily, innovations in aircraft are allowing for larger water drops. While retrofitted large passenger jets such as the McDonnell Douglas DC-10 and Boeing 747 have begun joining the battle, larger helicopters are also finding ways to increase their impact.

Columbia Helicopters has used its Boing CH-47D Chinooks and Boeing Vertol 234s on fires for years using buckets. However, two years ago, they began water drops using their new Simplex 2,800-gallon interior tank. Filled with either a pump or snorkel, the tank allows Columbia to drop more suppressant or retardant, decrease turn times, and be far more efficient.

“Our clients have been very happy with the dispersal pattern and effectiveness of the onboard tank,” says Keith Saylor, director of commercial operations at Columbia. “Our aircraft are by nature the heaviest lifters in the civilian world and the fastest and most economical from a fuel-burn standpoint. The tank is one of the most economical tools in firefighting and increases our efficiency.”
More Eyes in the Sky

Perhaps the most innovative change in firefighting are unmanned aircraft systems (UAS). Mark Bathrick, director of aviation services for the U.S. Department of Interior (DOI), has been a staunch supporter of bringing UAS and pilot-optimal aircraft to the fire battlefront. For several years, he’s worked with UAS manufacturers, operators, and government to illustrate the value of the technology in wildland firefighting, and he’s starting to see the work pay off.

“There’s no question, UAS have the ability to do work when our aircraft cannot, including at night and in low-visibility and meteorological situations that make flying unsafe,” Bathrick says. “Demos we held with manufacturers in 2015 were extremely helpful in developing new requirements for solicitations, and in 2018 I hope to have a contract for services for strategic-level, long-endurance UAS for reconnaissance work.”

Currently, the DOI already owns 245 small quadcopters used throughout its agencies for natural resources work such as surveys, mapping, remote sensing for wildlife, habitat studies, and wildland fires. The agency-owned UAS were deployed on 50 fires, flying 330 flights by September 2017. They use a variety of interchangeable sensors including IR and various range cameras to map perimeters and identify hot spots not visible to the naked eye. This information allowed incident commanders to tactically manage fire response, Bathrick says.

“The Northwest fires were very bad this year, and tremendously smokey with very little wind at times,” he says. “There were whole days where the only things flying were our UAS due to visibility. And the information they gathered allowed us to fight the fire smarter on the ground.”

Costing the agency as much as $150,000 per UAS for firefighting in 2015 was Textron Systems’ Aerosonde. Capable of flying for more than 14 hours and 75 miles while carrying sensors and cameras for a total payload of 20 lbs, the Aerosonde has been refined in military uses, having logged more than 150,000 flight hours.

“I think the biggest limitations on technology like the Aerosonde are the regulations around UAS,” says Dennis Racine, Textron Systems Unmanned Systems senior director of civil and commercial operations. “In a controlled situation such as a fire, and based on approvals, we’ve proven it is a valuable asset.”

Textron Systems demonstrated the aircraft on the 2015 Tpee Springs fire in Idaho. Integrating with manned aircraft in the temporary flight restriction around the fire and coordinating with air commanders, it flew above the firefighting aircraft. The Aerosonde used IR and cameras to identify hot spots that firefighters mistakenly thought were out. The UAS also spotted temperatures in the fire that were indicators of where the fire had the highest potential to spread, as well as fire lines where manned aircraft were unable to go during the first 24 hours of the fire because of visibility.

“We were able to prove UAS can not only assist with information to help fight fire smarter, but also help with post-fire reports using geosurvey data to identify potential areas for mudslides, landslides, etc.,” Racine says.

Lockheed Martin’s smaller quadcopter, the Indago, is providing similar work on a smaller scale. Weighing in at 5 lbs with a payload of swappable camera and IR sensors, it is collapsible and easily carried into range of the fire.

“While most of our customers are smaller agencies, we have had a significant increase in interest from federal agencies on down in the last six to eight months,” says Jared Hogge, Indago program manager at Lockheed. “People are starting to understand the value a UAS can offer to their program and are calling to learn about starting their own program.”

It is just a matter of time before UAS will be integrated into almost every firefighting operation, says Bathrick. One of the manufacturers to host a demonstration of its technology for firefighting in 2015 was Textron Systems with its Aerosonde UAS.

Jen Boyer is a 20-year journalism and public relations professional in the aviation industry, having worked for flight schools, OEMs, and operators. She also holds a rotorcraft commercial instrument license with flight instructor and instrument instructor ratings. Boyer currently runs her own public relations and communications firm and freelances regularly for aerospace companies and publications. She can be reached at jen@theflyingpenguinpr.com.
Girls in Aviation Day

Inspiring the Next Generation of Female Helicopter Pilots

On Sept. 23, 2017, Women in Aviation International (WAI) chapters around the world brought passion, exploration, learning, and the excitement of aviation and aerospace to approximately 9,700 participants in the third annual Girls in Aviation Day.

The Wright Chapter of WAI welcomed approximately 80 girls to its Batavia, Ohio, event at Sporty’s Pilot Shop — one of the most respected names in aviation. They were joined by Allison McKay, vice president of Helicopter Foundation International. Sporty’s was founded in 1961 by Hal Shevers and has grown to include support for every segment of light aircraft.

Stations at the event included information about aviation careers, learning to fly, maintenance, air traffic control, military, helicopters, and engineering. HFI donated its coloring book, Come Fly with Me!, and a children’s book, Finnegan Fling-Wing’s Airshow Adventure, written by HAI’s Director of Safety Steve Sparks.

“HFI shares WAI’s desire to teach young girls and boys about helicopters and what they can do,” says McKay. “For some, all it takes is a helicopter ride, or even just a chance to see a helicopter in action, to set them on a path to become a pilot, maintenance technician, or other aviation professional.”

Stephanie Bell, civil rotary wing business development manager at Rockwell Collins, was at the event’s helicopter station. She happily explained to the kids how helicopters fly and what missions they support. “I got involved in WAI, and subsequently Girls in Aviation Day, because I love giving kids the exposure to aviation, and especially helicopters, that I have had my entire life,” Bell says. “Because my Dad is a Bell and my Mom is a Hughes, I grew up around dinner tables where explanations of ‘settling with power’ and translational lift were drawn on napkins.

“My dad and I own a Bell 47G2 together, and we love giving kids (and adults) rides, especially as a first flight. It’s amazing to see that aviation bug bite.”

Girls in Aviation Day Highlights

- 12 countries participating
- 74 events by WAI chapters and corporate members
- 35 U.S. chapters
- 15 international chapters
Frank H. Duke, Boeing Test Pilot, Reaches New Speeds

By Martin J. “Marty” Pociask

Frank H. Duke began his aviation career flying for the U.S. Navy and Marine Corps, beginning first with fixed-wing aircraft and later helicopters. During his career with Boeing as a test pilot, he flew four “First Flights.” Those flights included the Boeing research helicopter designated the Model 347, the YUH-61A, and the Model 360.

“See Your Recruiter”

Duke grew up in a small town in eastern Pennsylvania. After graduating high school in 1949, he drifted for a year, working as a carpenter’s helper, until his parents forced the issue and enrolled him at the Pennsylvania State College.

Duke’s mother died in his freshman year of college, which he describes as “a crushing blow.” Because of his absences during her illness and funeral, Duke missed too many classes and failed to pass calculus.

To make up the class, he had to attend summer school. This entailed a grueling schedule of getting up before sunrise, then taking a series of train, subway, and bus rides, and finishing up with a mile-walk to the classroom — five days a week. Duke passed Calculus I, and the instructor recommended that all the students take Calculus II. Duke passed that class as well, which meant that he had 62 college credits.

During his travel to his summer school class, Duke had seen a future for himself in a subway poster. “I saw an ad showing a navy pilot climbing into the cockpit of a jet fighter. ‘See Your Recruiter’ were the keywords, and see a recruiter I did!”

The recruiter told him that 60 college credits were required to apply. Thanks to that extra calculus class, Duke had 62. After passing the required physical and aptitude tests, he left Penn State and enlisted in the navy.

Duke’s initial training as a naval aviation cadet was in Pensacola, Florida. He soloed in the North American SNJ, the navy’s designation for the North American T-6 Texan. The student pilot sat in the front, and the instructor was seated in the rear.

After primary flight school, Duke was assigned to advanced flight school in Corpus Christi, Texas, where he met lifelong friends.

After completing flight training, all navy aviation cadets were given the option to serve in the U.S. Navy or Marine Corps. Duke opted for the navy, but then was crushed to be assigned to fly the PBY, a seaplane nicknamed the pigboat.

No cadet had volunteered for this unglamorous mission, so paper chits were placed in a hat, and the cadets drew their assignment. “My cadet buddy picked fighters and was given a pilot’s crash helmet while I was issued sunglasses and a ball cap!” says Duke.

Duke spent the next week trying to get a transfer to fighter jets, but no dice. Then he got lucky. Two
weeks into Duke’s seaplane training, another student was recalled to his duty station, leaving an open slot at the All-Weather Flight School. Duke was reassigned to that slot, flying twin-engine SNBs, the navy’s version of the Beechcraft Model 18. He also flew the Douglas A-1 Skyraider.

After completing his flight training, Duke chose to fly for the marines rather than the navy. “I resented seeing my career path selected by chits drawn from a hat, so I opted for a commission in the marine corps. I was accepted and pinned with second lieutenant bars and navy wings of gold.”

After commissioning, Duke took some time off to return to Pennsylvania and marry Betty Betham, his longtime girlfriend. The two recently celebrated their 63rd year of marriage.

The newly married Dukes next moved to USMC Air Station Cherry Point, North Carolina. There the two enjoyed great camaraderie with other pilots and their wives while Duke transitioned to jet fighters in the Grumman F9F-2 Panther. He was next assigned to a fighter squadron flying the McDonnell F2H-4 Banshee.

As the Korean Conflict wound down, so did the need for fighter pilots. Soon, with no pilots leaving for Korea, but with newly commissioned pilots arriving from training, Duke’s squadron was overstaffed, and both pilot flight time and morale took a dive.

“Fighter Pilots Don’t Fly Helicopters”

Duke had already decided that he would not be a career marine officer and felt there was a future for helicopters, so he volunteered for helicopter pilot training. “My CO thought I had lost my mind,” says Duke. “‘Fighter pilots don’t fly helicopter,’ he said.”

Duke returned to Pensacola for helicopter pilot training, where he flew four different models, including single rotor and syncopter. He then was sent to the Marine Corps Air Facility in Jacksonville, North Carolina, where he was a transport pilot flying the Sikorsky HRS (the marine corps variant of the H-19 Chickasaw).

By this time, Duke’s four-year obligation to the marines was coming to an end. Convinced that he should complete his college education, Duke elected to leave the marines. He also briefly considered a career in the airlines, but instead he and Betty returned to Pennsylvania.

Betty found work, and Duke was hired by the Piasecki Aircraft Corporation as a student engineer, working part-time. Duke supplemented the family’s meagre finances by flying the Grumman F9F-7 swept-wing Cougar and the HUP-2 helicopter as a “weekend warrior” at the nearby Willow Grove Naval Air Station.

After graduating with a degree in mechanical engineering, Duke accepted a job with Piasecki as a full-time engineer. Shortly after that, he was contacted by Kaman Aircraft Corporation in Connecticut about a test pilot position.

Eager to get back into the cockpit, Duke accepted the job without even knowing the salary and was assigned to work on the contract to build a new Navy helicopter, the SH-2 Seasprite. “The work schedule was very demanding,” says Duke. “On many days, I commuted to work in the
morning with my headlights on … and returned home at night the same way. But the dedication and loyalty of my fellow employees was outstanding, and never duplicated by any company.”

“A Test Pilot with a Great Company”
After one year at Kaman, Duke was contacted by Boeing Helicopters, which now owned Piasecki Aircraft, and asked if he would like to return as a test pilot.

Duke initially worked on the U.S. Marine Corps CH-46 Sea Knight project there. In 1962, he was sent to the U.S. Navy Test Pilot School. After that, he was appointed senior project test pilot on the CH-46 program. In this job, Duke was responsible for all Boeing test pilot activity for the program.

“During this period, I conducted most of the flights required to demonstrate specification compliance and structural airworthiness,” he says. “This required putting the aircraft into dives, pullouts, ‘hard’ landings, and flight conditions more rigorous than those anticipated to be flown by marine corps and navy pilots. Included in this testing was an unprecedented requirement to autorotate the helicopter to water of sea state 3 (2-to-3-foot waves, scattered whitecaps) with neither engine providing power, without supplemental flotation devices, and do it five times!”

Four First Flights
Duke made four first flights in his Boeing career, including piloting the
A YUH-61A helicopter in a competition to replace the UH-1H Huey.

In the late 1970s, Duke flew the first flight in a Boeing research helicopter, the Model 347, a U.S. Army CH-47 Chinook derivative. The improvements included a stretched fuselage and increasing the height of the aft pylon to allow for four-bladed rotors to replace the Chinook's three-bladed configuration, advanced geometry rotor blade tips, retractable landing gear, increased soundproofing, and a state-of-the-art avionics suite.

“On the first forward flight, my co-pilot and I flew the aircraft to its maximum-level flight speed of approximately 170 mph, limited only by the drive system torque limit. The 347 was truly a pilot’s helicopter,” Duke says.

Duke was also the first pilot to fly the winged Model 347. “The added wing was positioned vertically for hover and slow forward flight, to minimize the penalty that resulted from impingement of rotor wash in a horizontal position,” Duke says. “As the aircraft accelerated, the wing rotated down to the conventional horizontal position to enhance maneuverability and relieve the rotor of in-flight structural loads.”

In the early 1980s, Duke was promoted to director of Boeing’s Flight Test Department, responsible for test engineers, instrumentation engineers, and test pilots. Most importantly, in that position, he could continue as a test pilot.

Duke’s fourth first flight was in the Boeing Model 360, a research aircraft built almost entirely of composite materials. During testing, Duke and his copilot flew the helicopter in excess of 245 mph, which at that time was believed to be the fastest speed of any U.S. helicopter.

The Test Pilot's Motto
Duke retired from Boeing after 32 years with the company. Describing Boeing as a great company to work for, Duke enjoyed the worldwide travel associated with his duties there.

He also got to work with industry figures such as Charles Kaman, Chuck Ellis, Bill Murray, Al Newton, Leonard LaVassar, and Bill Peck.

Duke’s three children followed their father into aviation: his two sons, Frank and David, both became pilots, and his daughter, Karin, is a former flight attendant.

Duke has some advice for young men and women considering a career in helicopter aviation. “Realize that not everything in life will go according to plan. Stay positive and do not become discouraged.” He cites a favorite quotation: “It is easy enough to be pleasant when life flows along like a song … but the one worthwhile is the one who can smile when everything goes dead wrong.” A good motto for a test pilot!

Martin J. Pociask
is curator for Helicopter Foundation International.

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Matthew Davis

Windsor, Connecticut, USA

Current Job: Aircraft Mechanic

First Aviation Job: Intern for an insurance company

Favorite Helicopter: Sikorsky S-76

Q Your current role?

A As an aircraft mechanic at a Fortune 100 company in the New York area, I am responsible for the daily airworthiness of one Sikorsky S-76C+, one Gulfstream 450, and two Gulfstream 550s.

Q What challenges you about helicopter aviation?

A The newer helicopters have a lot more technology and cabin systems. You can find yourself spending more time working on the luxuries than the mechanics.

Q How did you decide helicopter aviation was the career for you?

A I was drawn to helicopters at a young age. I grew up near Bradley International Airport and always had an interest in the aircraft that flew over our family farm. I started my helicopter career as an intern with a local insurance company on their two VIP Sikorsky S-76C+ helicopters and was hooked immediately. I enjoy the complexity and challenges of helicopter maintenance.

Q What still excites you about helicopter aviation?

A Sitting in the left seat for a flight check after completing required maintenance and watching a helicopter take off after I’ve worked on it, knowing I’ve done a good job, is still exciting.

Complete this sentence:

I know I picked the right career when ... I get to fly onboard or watch an aircraft I maintain take off.
Your current role?

Sundance Helicopters is a Part 135, 133, and 137 operator based in Las Vegas. I am responsible for operational control of our fleet of 30 aircraft and 60 pilots flying from two bases, and for our charter work throughout the Southwest.

Who inspires or has inspired you?

I have been fortunate to meet some amazing mentors. My first employer in the industry, Chin Tu, provided a lifetime of inspiration and advice. My current source of inspiration are the pilots and ground staff that I work with. It is a great pleasure learning from them, conspiring to achieve our objectives, and helping them reach their goals.

What do you think is the biggest threat to the helicopter industry?

Access, perception, and noise concerns continue to be the biggest issues that operators in my part of the industry will face moving forward.

What advice would you give to someone pursuing your path?

Treat your very first flight as a job interview. Pick a path that you can be passionate about and never accept a position that is “just a job.”

What challenges you about helicopter aviation?

Moving parts. Our operation depends on so many pieces of a big puzzle, all coming together at precisely the right time to deliver an amazing product in the safest manner possible.

Mark Schlaefli

Las Vegas, Nevada, USA

Current Job: Director of Operations for Sundance Helicopters

First Aviation Job: Flight instructor with Civic Helicopters

Favorite Helicopter: MD 530F
Calendar of Events

2017

November 9–11
22nd Annual HAC Convention and Trade Show
Helicopter Association of Canada
Ottawa, Ontario, Canada
h-a-c.ca/convention.html

November 12–16
Dubai Airshow
F&E Aerospace
Dubai, United Arab Emirates
dubaiairshow.aero

November 14–15
HAI Annual Firefighting Safety Conference
Helicopter Association International
Boise, Idaho, USA
rotor.org/firefightingconf

November 14–15
4th International Powerline Symposium
Helicopter Association International,
Airbus helicopters
Alexandria, Virginia, USA
cvent.com/events/4th-international-powerline-symposium

November 28
5th EASA AD Workshop
European Aviation Safety Agency
Cologne, Germany
easa.europa.eu/webshop/5th-EASA-AD-Workshop

2018

November 28–30
ALEA 2017 Safety Seminar
Airborne Law Enforcement Association
Napa, California, USA
alea.org/2017-safety-seminar-napa-ca

December 4–7
51st Annual NAAA Convention & Exposition
National Agricultural Aviation Association
Savannah, Georgia, USA
agaviation.org/convention

December 5–6
11th Rotorcraft Symposium
European Aviation Safety Agency
Cologne, Germany
easa.europa.eu/newsroom-and-events/events/11th-rotorcraft-symposium

January 16–19
Aeromechanics Design for Transformative Vertical Flight
AHS International
San Francisco, California, USA
vtol.org/aeromechanics

February 6–8
ALEA 2017 Safety Seminar
Airborne Law Enforcement Association
Destin, Florida, USA
alea.org/2018-safety-seminar-destin-fl

February 20–22
Airworthiness, CBM and HUMS Technical Meeting
AHS International
Huntsville, Alabama, USA
vtol.org/cbm

February 26–March 1 (Exhibits open Feb. 27–Mar. 1)
HAI HELI-EXPO 2018
Helicopter Association International
Las Vegas, Nevada, USA
heliexpo.rotor.org

February 26
HRRA Helicopter Rescue Summit 2018
Helicopter Rescue and Response Association
In conjunction with HAI HELI-EXPO 2018
Las Vegas, Nevada, USA
helirescueassociation.org

March 22–24
2018 International Women in Aviation Conference
Women in Aviation International
Reno, Nevada, USA
wai.org/2018-international-women-aviation-conference

May 14–17
74th Annual Forum and Technology Display: The Future of Vertical Flight (Forum 74)
AHS International
Phoenix, Arizona, USA
vtol.org/forum

May 24–26
HeliRussia 2018
Ministry of Industry and Trade of Russia
Moscow, Russia
www.helirussia.ru
Long-Time Educator Follows Passion for Aviation

Paul Pelletier, winner of a Helicopter Foundation International Maintenance Technician Certificate Scholarship, has always had a passion for all things technical, especially aviation.

Born and raised in Connecticut, Pelletier spent 17 years as a vocational technical educator. From 2007 to 2012, he worked in an urban school district, where he was recognized for his contributions and promoted to a Science, Technology, Engineering, and Mathematics (STEM) resource teacher position to help other teachers succeed in the classroom.

Aviation has always been a hobby of Pelletier’s — he earned his private pilot’s license in 1993 and his rotorcraft pilot’s license in 1998. With the support of his wife of 23 years, Pelletier decided to pursue a career in aviation, specifically rotorcraft.

He enrolled at CT Aero Tech School for Aviation Maintenance Technicians, the oldest A&P school in the United States, to become a helicopter mechanic. He is currently two-thirds through his studies and plans to graduate in June 2018.

To gain experience while pursuing his A&P, Pelletier is working at Hartford Jet Center, a local fixed-based operator and Part 135 operation at Hartford-Brainard Airport (KHFD) in Hartford, Connecticut. In addition to performing maintenance under the supervision of a licensed A&P, Pelletier works in fuel farm management and customer service. He has received the National Business Aviation Association Fuel Line Service and Professional Line Service certifications. In addition, he attended the Rolls-Royce Model 250 factory school, as well as Flight Safety’s training on the Pratt & Whitney PT6T Twin-Pac.

Always looking to learn more, Pelletier is planning to attend Robinson airframe training in the spring. “I would like the Bell 206 or AB 135 airframe training. I now qualify to apply for the Bill Sanderson Aviation Maintenance Technician Scholarships and am working on the application.”

When asked about his future plans, Pelletier says his goal is to “find a job where I am maintaining and flying a helicopter for an operation. I also think doing field maintenance, like for a K-Max for example, would be interesting.”

Throughout his teaching career, Pelletier told his students to follow their passion. He has now taken his own advice and is turning his hobby into his next career. R

Allison McKay is vice president of Helicopter Foundation International.
Patrick Jaeger, HFI Scholarship Recipient

Helicopter Foundation International (HFI) scholarship winner Patrick Jaeger passed away August 4, 2017, following a motorcycle accident. Jaeger was the recipient of a 2017 HFI Commercial Helicopter Pilot Rating scholarship and had completed his training earlier this summer.

Jaeger was born and raised in Champlin, Minnesota, and was one of five children. He was active in sports and the outdoors. His personal drive and work ethic enabled him to buy a personal watercraft when he was just 14. He graduated from Champlin Park High School in 2008.

Following school, Jaeger joined the U.S. Navy and became a Navy Seal. The Navy trained Jaeger in scuba diving, skydiving, cold weather survival, and many other extreme skills required of his mission. He attended and passed Navy Seal Sniper School and later became a course instructor. He was a member of Navy Seal Team 10 and received decorations for his actions during two deployments to Afghanistan.

After eight years as a Navy Seal, Jaeger chose to join the Navy Seal Reserves program and started flight school to become a commercial helicopter pilot. He had completed his private helicopter license, received his instrument and commercial ratings, and had just begun his instructor-level training at the time of the accident.

He is survived by his parents, David and Theresa; siblings Stephanie (Tim), Brandon (Sue), Sean (Emily), and Melissa (Zach); grandmothers Margaret Jaeger and Yvonne Jenson; and a large crew of aunts, uncles, cousins, nieces, and a nephew.

Tony Reece, Founder of HiLine Helicopters

Anthony (Tony) B. Reece, age 81, passed away peacefully on August 16, 2017, at Virginia Mason Hospital in Seattle, Washington, from complications of acute myeloid leukemia. Reece founded HiLine Helicopters in Washington State in 1978 and received recognition from HAI several times for his flying.

Reece was born March 11, 1936, in Darrington, Washington, to Albert and Lauretta (Mulhurn) Reece, the seventh of eight children. He graduated from Darrington High School and served in the U.S. Army, where he played fiddle on a radio show in Germany.

Following his time in the military, he joined his brothers in building Reece Brothers Logging Company. He left that company to start HiLine.

Reece flew for many government agencies, including the U.S. Geological Survey, U.S. Forest Service, and National Park Service. He assisted in more than 400 search and rescue missions before retiring in March of 2016.

An HAI member for 31 years, Reece received several awards during his career, including the 2002 HAI Pilot Safety Award, the 2008 HAI Salute to Excellence Robert E Trimble Memorial Award for Mountain Flying, the 2012 U.S. Department of Interior Citizen’s Award for Bravery, and the 2012 Trail Builder of the Year. He also received an HAI award for 25 years of safe flying.

Reece is survived by his loving wife of 58-plus years, Betty Sue; children Floyd “Pete” (Suzie) Reece, Sarah (Calvin) Burlingame, William Taylor, and Heather (David) Baker, all of Darrington; nine grandchildren and eight great-grandchildren; sister Teresa Howard; and many nieces and nephews. A celebration of his life was held on September 16, 2017.
Bob Martin, an electronic news-gathering (ENG) pilot and long-time flight safety advocate, passed away when his news helicopter crashed on September 16, 2017. An ENG pilot for Albuquerque station KRQE for more than 20 years, Martin was known for his desire to keep viewers safe and informed, and also for his ability to craft a story.

Martin was also active in HAI’s Electronic News Gathering Committee. “He never wanted to hold the top position in charge of the committee,” remembers David York, former HAI vice president of regulations and international affairs. “He served as secretary and did most of the work for us. He was very instrumental in producing the HAI Safety Guide for ENG operators. It’s still on the HAI website today.” York described Martin as an old-school ENG pilot who reported on the story and flew the helicopter at the same time. “He advocated that style, and he developed specific training that ensured a pilot could accomplish both tasks safely.”

“Bob Martin was an ambassador for the helicopter industry,” adds Stan Rose of the Helicopter Safety Alliance. “He always took the time to help his friends and was a tireless promoter of safety.”

Rose detailed how Martin would bring together pilots from local military, public use, and civil operators for an annual day-long safety event that was filled with current thinking and innovations for the helicopter world. His colleagues are going to continue the tradition and have renamed it the Bob Martin Helicopter Safety Day.

Martin graduated from Socorro High School in Socorro, New Mexico, and obtained his degree in mass communications and journalism at Eastern New Mexico University. He thrived on telling stories about New Mexico history and lifestyle, and also covered harder news stories like wildfires and wars overseas.

In addition to being a commercial helicopter and airplane pilot, Martin was a skydiver and scuba diver. He was also a licensed drone pilot and instructor. Martin is survived by his father, three brothers, and his wife.

---

**Bob Martin, Long-Time ENG Pilot and Safety Advocate**

**Donate your surplus, retired, or grounded equipment! HFI will match it with A&P schools that will use it to train the next generation of rotorcraft professionals. Thanks to your gift, A&P students will receive more exposure to helicopter aviation — another step in ending the shortage of A&P mechanics in our industry.**

**If you have surplus rotorcraft equipment — aircraft, engines, or parts — that you no longer need, contact:**

Allison McKay, HFI vice president
703-683-4646
allison.mckay@rotor.org

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<td>Hertz</td>
<td>800-654-2200</td>
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<td>hertz.com/hai</td>
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<td>HFI: Donate Surplus Equipment</td>
<td>703-683-4646</td>
<td>703-683-4745</td>
<td>helicopterfoundation.org</td>
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<td>HFI: Donate to HFI</td>
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<td>HFI Golf Tournament</td>
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<td>HFI Heritage of Helicopters</td>
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<td>HFI Online Silent Auction</td>
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<td>HFI Scholarship Program</td>
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<td>Jet Support Services, Inc. (JSSI)</td>
<td>312-644-4444</td>
<td>312-644-4440</td>
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<td>KING Schools</td>
<td>703-683-4646</td>
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<td>Milestone Aviation</td>
<td>353 1 216 5700</td>
<td>353 1 296 5159</td>
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<td>onPeak</td>
<td>855-211-4898</td>
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<td>Pacific Southwest Instruments</td>
<td>951-737-0790</td>
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<td>psilabs.com</td>
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<td>Precision Fuel Components</td>
<td>425-513-6789</td>
<td>425-513-6788</td>
<td>precisionfuel.com</td>
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<td>Tri-Star Technologies</td>
<td>310-536-0444</td>
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<td>tri-star-technologies.com</td>
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