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DISPATCHES

WINTER 2020

**BUILDING
CLINICAL**
capability and
capacity

**Critical Care
AIRSPACE**

BEYOND THE ROADS
ON MAINE'S
EASTERN BORDER



photo by Billy Stuart



BUILDING CLINICAL capability and capacity

Collaborative training program in Aroostook aims to be a model for improving emergency care in Maine's rural regions

Every sixty seconds an ambulance arrives at an emergency department somewhere in Maine with a 9-1-1 patient. While most of these patients are treated quickly and completely at the initial hospital, some of them need to be transferred to a specialty physician and hospital for care that isn't available locally.

For those patients who suffer from time-sensitive critical illnesses or injuries and require hospital-level care during transport, LifeFlight is called. As the number of these patients has grown over the years, LifeFlight has added aircraft and advanced clinical crew to meet the need. While this has helped hundreds of additional patients each year, there are still some who need critical care transport but LifeFlight cannot reach due to weather and resources.

Aroostook County in particular presents a special challenge for patients who need care at a different hospital. The geography and distances are complex, combined with some of the harshest winter conditions in the state. Aroostook's four community

hospitals (Northern Maine Medical Center in Fort Kent, Cary Medical Center in Caribou, Northern Light AR Gould in Presque Isle, and Houlton Regional Hospital) are located farther from a major medical center than any of Maine's other hospitals. When LifeFlight is unable to respond, the hospitals need to provide ground transfer to distant specialty centers with local teams.

Faced with these challenges, the hospitals and LifeFlight launched a collaborative effort to build additional capacity and capability for ground transport. Hospital physicians, LifeFlight and Northern Maine Community College (NMCC) have come together to develop an education program designed to update the skills of physicians, nurses and paramedics to the most current critical care standards. In addition, the program aims to improve core resuscitation and critical care skills of hospital staff.

The program is being delivered by LifeFlight's Critical Care Academy in conjunction with local emergency physicians, NMCC and the Critical Care Training Institute. The project is being supported by Linda and Diana Bean, the Lunder Foundation, the Davis Family Foundation, and the MCCS Maine Quality Centers.

A few years ago, LifeFlight created the mobile Critical Care Academy to improve capacity and capability across the state. The Academy's focus is to improve the clinical proficiencies of experienced providers currently working in hospital emergency departments, intensive care units or transport environments. The program supplements existing educational programs for EMTs, paramedics and nurses currently provided by Maine's community colleges and universities.

As the first cohort of students completes the training in March, LifeFlight and its partners are evaluating the program's success and looking ahead to a second program in Aroostook County later this year. The goal is also to work with teams in other parts of Maine to test the viability of replicating the effort in rural areas which face many of the same challenges.

Bean match campaign inspires donors to give \$1.5 million to support LifeFlight

LifeFlight of Maine is pleased to announce that the 2019 Linda and Diana Bean fundraising challenge match was an unqualified success, reaching its \$1.5 million goal much earlier than expected, thanks to an outpouring of gifts made by hundreds of donors – some loyal friends who have supported us for years, but many more who were inspired to give for the first time. A major component of the match campaign was Linda's summer island fundraiser. The event brought hospital leaders and LifeFlight leaders together with new donors to raise more than \$1 million right "at the microphone" all of which was matched by the Bean sisters, and which brought the campaign total to \$3 million. More than half of the total raised will support LifeFlight's efforts to train the state's critical care workforce in new treatments, technology and rapid rescue procedures.

These training programs are being conducted with emergency service staff across Maine's network of hospitals. For example, in December Portland's Maine Medical Center training exercise for dual aircraft was executed by staff without a hitch, receiving mock patients from two helicopters that landed atop the new Coulombe Family Tower. Paul Coulombe, Linda Bean and Diana Bean, all native Mainers and longtime supporters of LifeFlight, expanded their healthcare-targeted philanthropy in 2019 with multi-million dollar gifts to support Maine Medical Center's major expansion project which also includes "The Sisters" rooftop landing pads.

"People who wouldn't have survived a few years ago can recover and return home to lead full lives. You never know when it could be you or a loved one who needs it. LifeFlight is on the slopes, on islands, in the woods — everywhere people are having a critical emergency!"

--Linda Bean



Maine philanthropist and LifeFlight supporter Linda Bean is pictured here with Mike Baumann MD, LifeFlight Foundation Trustee and Chief of Emergency Medicine at Maine Medical Center, on the new "Sisters Heliport" at MMC. Photo by Billy Stuart.

"Collaboration between Maine's hospitals and LifeFlight is more important than ever," explains Linda. "Small community hospitals are struggling and some have closed. Time is of the essence to provide emergency support and air transport to our remaining hospital facilities. Last year alone, LifeFlight cared for more than 2,200 critically ill and injured patients. Won't you make your 2020 gift to LifeFlight today?"

Linda is passionate about LifeFlight and Maine's larger healthcare system, reminding everyone, "You never know when it could be you who needs it. Or a loved one or a trusting visitor. LifeFlight is on

the slopes, on islands and coastal peninsulas, in the woods, over highways and byways — everywhere people are having a critical health emergency! I urge others to host a fundraiser at home, camp or business; to inspire others to give if you can offer to match some donations; or to send your own check today to LifeFlight Foundation, PO Box 899, Camden ME 04841."

On behalf of all the patients whose lives have been touched by Maine's critical emergency healthcare system, we are deeply grateful for each and every one of your generous gifts. For more information on how to make a gift or pledge today, please visit www.lifeflightmaine.org.

Critical Care AIRSPACE

LifeFlight is on a mission to provide critical care and transport to every patient in Maine who needs it. But we're not there yet and one big reason why is the weather. Flying helicopters in Maine's rugged geography has always been a challenge for LifeFlight, one that we've been tackling since day one. Over the years, we've

- Purchased twin-engine, instrument flight helicopters
- Added aviation infrastructure like weather stations (AWOS) to give our pilots more reliable weather information
- Established instrument landing approaches so we could reach all of Maine's hospitals and most of its inhabited islands more reliably
- Developed partnerships with ground ambulance colleagues
- Added a King Air plane to our fleet which can fly in a wide range of weather conditions

Overcoming the weather

Challenges remain, however, and there are still patients who we can't reach by air because of weather conditions like fog and icing. With support from the Federal Aviation Administration (FAA) we're working to make that number much smaller. The effort is rooted in navigation and consists of three major components: the nationwide mandatory shift from ground-based to satellite-based navigation (GPS); the creation of lower altitude, more precise flight routes across Maine; and helicopters capable of operating in the new system.

Before we look ahead, it's helpful to understand where we stand today. Today's airspace is primarily made up of defined

routes that go from one ground-based navigation station to another, and whose coordinates are accessible by aircraft pilots and air traffic controllers (ATC). Think of these routes as tunnels through the sky, defined by radio signals or GPS coordinates along the way. Because monitoring of the routes by ATC is based on data provided by ground-based radar, these tunnels are quite wide and often at a high altitude where bad weather and freezing conditions are more common. Now, when a call for help comes in to LifeFlight, our helicopter pilots check the weather along the route to determine if the mission can be accomplished safely. For most missions the helicopters must use these predefined instrument flight (IFR) routes to get from point A to point B, which means even though the weather at 3,000 feet is acceptable, we can't accept the mission because we have to fly a route that takes us to 7,000 feet where the temperature and humidity are producing icing conditions.

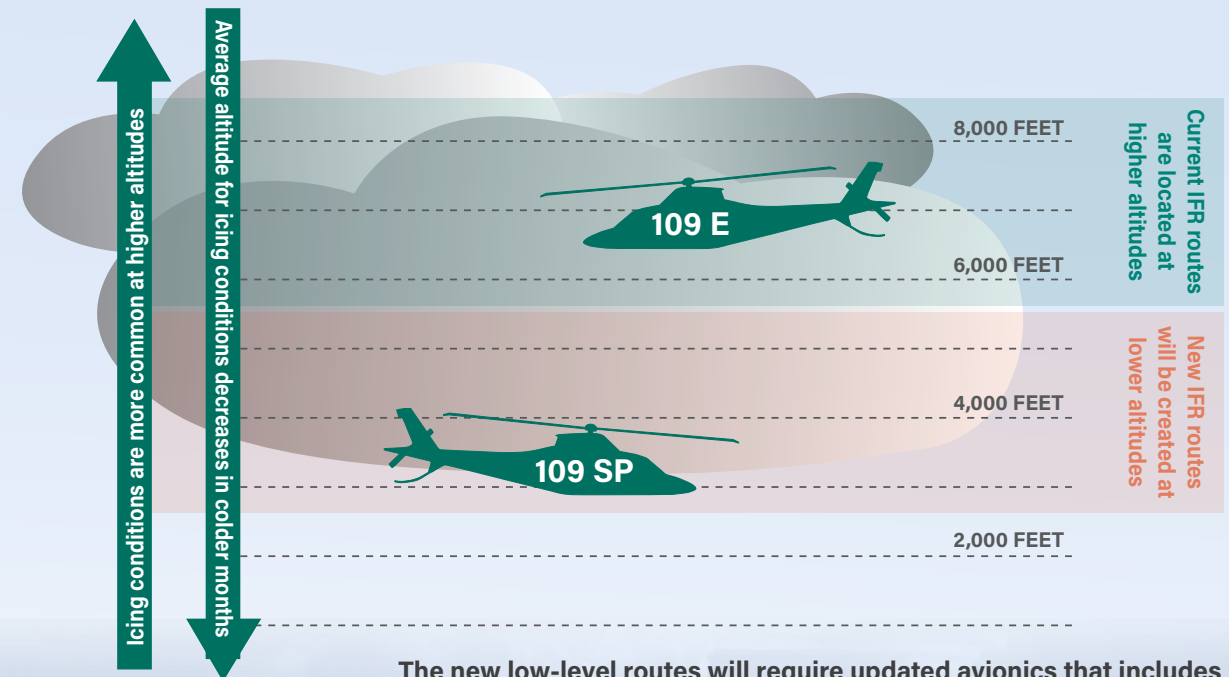
The FAA's NextGen Project

A few years ago, the FAA launched a multi-year modernization project aimed at moving all airspace infrastructure to a system that uses data provided by satellite-based GPS which is much more detailed and accurate than ground-based radar. As the FAA implements this technology, new routes that are more precise can be created. Specifically, the new routes allow precision operations at lower altitudes where icing is less common, improving the safety and reliability of LifeFlight in more weather conditions. This new statewide network of low-altitude instrument flight routes will be the first of its kind in the nation. The FAA, which is developing the routes, expects the finished network will serve as a national demonstration project for other states. The recently passed Federal Budget and FAA Reauthorization provides \$5 million to support project. The provision was sponsored by Senator Susan Collins with support from the Maine delegation. Once the routes are complete LifeFlight will be able to answer more requests by air because the helicopter can fly the mission at a lower altitude where the weather conditions meet our stringent safety minimums.

The right helicopter for the job

In order to access the new low-level flight routes and approaches, the helicopter will require updated avionics technology, specifically a 4-axis autopilot and the ability to receive vertical guidance from GPS. While our newest helicopter, an Agusta 109SP nicknamed Whiskey Mike, has this capability, our oldest two models, Echo Mike and Charlie Mike, do not. In order to answer more calls, we are on a mission to purchase two new Agusta 109SP models to replace the older 109E models.

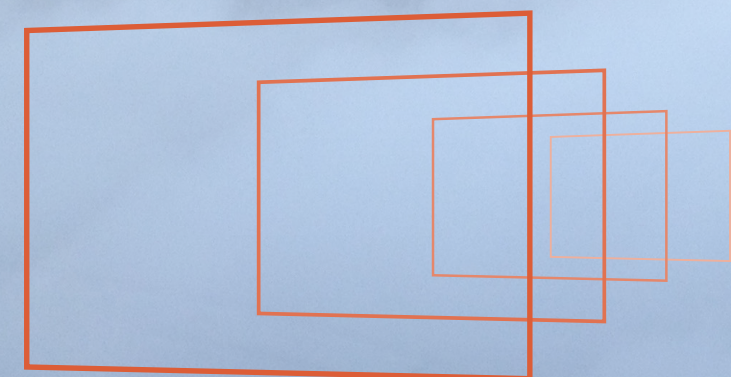
Benefits of Low Altitude Instrument Flight (IFR) Routes



The new low-level routes will require updated avionics that includes precision vertical guidance. LifeFlight's two oldest helicopters, Agusta 109 E models, don't have this capability. We need to replace them with Agusta 109 SP models, like the one we purchased in 2017.

IFR Routes: Highways in the Sky to Guide Aviators through Clouds

IFR (instrument flight) routes are the backbone of today's aviation navigation. These routes rely on data from decades old ground-based radar technology. The Federal Aviation Administration (FAA) is in the midst of a nationwide modernization project that will switch navigation over to satellite-based GPS, resulting in more accurate and precise data.



With more accurate and precise information, new IFR routes can be developed at lower altitudes which gives LifeFlight pilots more options to safely complete a mission. This means LifeFlight can answer more calls for help.

BEYOND THE ROADS

ON MAINE'S EASTERNMOST BORDER



You and your friends are snowmobiling deep in the Maine woods, miles away from any paved roads. Suddenly, you come upon a clearing with a yellow emergency rendezvous point sign, and you take note. Ten miles

further along the trail, one of your friends misses a turn, crashes into a tree and lands in the snow with the sled on top of her. You and your friends lift the sled off and someone starts stuffing coats into the open wounds. You remember the yellow emergency rendezvous point sign and race back to the clearing to call for help and relay the coordinates of your location.

Your friend is alive, still conscious but her condition is rapidly deteriorating from the uncontrollable blood loss. And she's more than a hundred miles from a trauma center. Time is now even more the enemy than the critical injuries themselves.

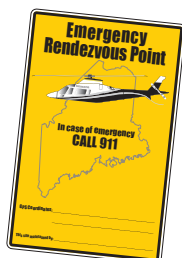
Quickly locating and evacuating critically ill and injured patients in the remote areas of Maine is essential to survival. LifeFlight of Maine covers a large and diverse geographic area. With an extensive shoreline, hundreds of coastal islands, dense forests, mountains and extremes of temperature, LifeFlight operates in one of the most complex aviation environments in the country.

When LifeFlight began operations in the late 90s, it could take six or eight hours to medevac victims of logging and recreational accidents because it was so difficult to locate and access the scene. Many patients just ran out of time from otherwise survivable injuries. To meet these challenges LifeFlight created the Remote Access Project—a system of care beyond the roads.

The project now includes more than 120 remote access LZs, all on private land with landowner liability releases, each with a responsible agency monitoring and keeping the site clear for 24/365 access. This summer, a new location in Danforth will be added to the database. A local landowner donated

about 1 acre of land near Grand Lake to be used as a designated landing zone. The effort is being coordinated by the Town of Danforth and is supported by a large contingent of volunteers, led by local resident Roger Rossignol. The group is undertaking several fundraising projects to help pay for the construction, which is scheduled to begin this spring.

The remote LZ sites are marked by a standard yellow sign picturing a LifeFlight helicopter, location name, and grid coordinates. All of the remote LZ locations and coordinates are included in an



online database with hundreds of LZs across the state.

Bonnie Clarkin, the snowmobiler above, had minutes to live when the LifeFlight team reached her. The first call to 9-1-1 immediately sent a helicopter toward the remote LZ. LifeFlight literally brings a hospital to a patient's side, a virtual door to the trauma center.

Calais Ambulance Chief Ken Clark noted that the landing zone in Danforth will result in a huge time savings for critically ill or injured patients. His crew would typically transport patients from this area to the hospital in Houlton, nearly an hour away by road.

In Bonnie's case, LifeFlight landed just 50 yards from the scene carrying blood, TXA, wraps, intubation, a ventilator, IV pumps, a portable laboratory—all the tools essential to saving her life. After a long healing process Bonnie is back to work and back to snowmobiling.



Building on 1 acre of donated land next to Grand Lake, a group of volunteers, together with the town, are establishing a remote landing zone for use in medical emergencies. Funded entirely by private donations, the group expects construction to begin this spring, with the final site ready before the end of 2020.

Paid Internship Opportunities

The LifeFlight Foundation in Camden, Maine has two paid internship opportunities open this summer. We are looking for one intern to work in marketing and communications, while the other will focus on development and fundraising. Successful candidates will be motivated and responsible college students or young professionals who would like to gain experience working in a nonprofit setting.

The fundraising intern will assist with event logistics, sponsorship solicitation and benefit fulfillment; provide support with mailings, gather materials for donor prospect meetings; and help with donor-

hosted receptions. He or she will be able to communicate effectively; be self-motivated and skilled at multi-tasking; and be proficient using the internet for various assignments including research.

The communications intern will assist with creating and updating newsletters, articles, press releases, graphics, photography, videos and outreach materials. He or she might design flyers, graphics, e-vites and other marketing material for events, and assist with content development for LifeFlight's website and social media channels. The successful candidate will have excellent writing skills and be able to draft succinct

and comprehensive copy for a variety of uses. He or she should have knowledge and familiarity with social media platforms, and be able to use a smart phone camera and video applications.

Both internships will run from approximately June 8 – Aug 28, 2020 (12 weeks) with a 4 to 5 day-a-week commitment, and be eligible for up to \$5,000 compensation.

If you are interested in either of these positions, please visit www.life-flightmaine.org/contact/job-listings.aspx for full position descriptions and application instructions. Deadline to apply is March 27, 2020.

LIFEFLIGHT FOUNDATION

DISPATCHES is a publication of The LifeFlight Foundation, which provides fundraising and public relations support to LifeFlight of Maine, the state's only medical helicopter service.

The LifeFlight Foundation is a nonprofit, tax-exempt organization under Section 501 (c) (3) of the Internal Revenue Service Tax Code. It is governed by an elected board of trustees who represent medical, business, legal and educational fields throughout the state.

The Foundation also supports the development and funding of Maine's major air medical needs, such as trauma training statewide; construction of hospital helipads; and installation of weather reporting, navigational and communications systems.

The Foundation's office is located in the town of Camden at 13 Main Street, 2nd floor.

You can reach us at 207-230-7092 or by email at info@lifeflightmaine.org.

Donations are tax-deductible.

LIFEFLIGHT OF MAINE

LifeFlight of Maine is a nonprofit statewide critical care medical helicopter service jointly owned by Northern Light Health and Central Maine Healthcare Corporation. LifeFlight's airplane, three helicopters and dedicated ground ambulances, based in Bangor, Lewiston and Sanford and operated by SevenBar Aviation, cover the entire state and offshore islands. LifeFlight complements and supports the work of local EMS and hospital personnel in caring for the critically ill or injured. Each base is staffed by a highly qualified team of pilots, mechanics, flight nurses and paramedics. More than 28,000 patients have been safely transported since LifeFlight's founding in 1998.

LifeFlight was fully re-accredited by the Commission on Accreditation of Medical Transport Systems in 2019.

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