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Interagency Aviation

ACCIDENT PREVENTION BULLETIN



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Subject: Inadvertent IMC? No Way!

Area of Concern: All Aviation Activities

Distribution: All Aviation Users

Discussion: Inadvertent instrument meteorological conditions (IMC) encounters are some of the most demanding and disorienting conditions a pilot can experience. These encounters also result in the highest percentage of death from helicopter crashes. When weather conditions make visual contact with the ground difficult or impossible, continued flight can only be conducted safely with primary reference to the flight instruments, whether the IMC encounter is entered deliberately or inadvertently. Attempting to re-establish the visual flight environment often results in dire consequences. Over the years, DOI has experienced several accidents where reduced visibility due to IMC conditions was a contributing factor.



The pressures and desires (whether internal or external) to proceed to your destination can be very powerful, especially if you're close to your destination. This Accident Prevention Bulletin is not about an aircrew's encounter with inadvertent IMC, but about a pilot who made the right decision to land the aircraft in order to prevent such an occurrence only 6 ½ miles from their destination.

On February 8, 2010 a helicopter with two National Science Foundation (NSF) grantees departed the NSF Icebreaker Nathaniel B. Palmer at 0836 en route to a field site approximately 30 miles from the ship. After disembarking the passengers, the helicopter returned to the ship. Approximately five hours later, the pilot returned to the site to pick up the NSF grantees and fly them back to the ship. During the return, the ceiling and visibility deteriorated rapidly causing the pilot to lose surface definition. Recognizing the elevated risk of entering inadvertent IMC conditions, the pilot chose to land at a location on James Ross Island where he could maintain positive surface definition and wait for the weather to improve despite their close proximity to the ship. Eventually, the weather did improve.....**four days later!**

Communication was maintained every two hours from 0700 to 2100 daily to monitor weather conditions and the aircrew's status. Three days later, the other helicopter assigned to the Nathaniel B. Palmer made two unsuccessful attempts to reach the stranded crew. Both times, the pilot elected to return to the ship rather than continue in poor visibility. On the third attempt, the pilot landed safely and recovered the crew. The following morning, a maintenance crew was sent to recover the helicopter and camping gear.

Despite being stranded for four days in unfavorable weather, the pilot and passengers were properly prepared with the right survival equipment to deal with the situation on the ground. The pilot implemented sound risk management by weighing the benefits and risks associated with continued flight and landing the aircraft at a safe location in deteriorating weather conditions. The successful outcome of this experience is a result of proper risk management decisions at many levels. The pilot received a commendation from the National Science Foundation for his actions.

Are you prepared to make the right decision?



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