

NTSB MOST WANTED LIST

CRITICAL CHANGES NEEDED TO REDUCE TRANSPORTATION ACCIDENTS AND SAVE LIVES

2014

ADDRESS UNIQUE CHARACTERISTICS OF HELICOPTER OPERATIONS

What is the Problem?

Every day, there are hundreds of helicopter operations in which pilots transport themselves and others. The U.S. civil helicopter industry continues to see overwhelming growth and demand for emergency medical services, law enforcement support, electronic news gathering, offshore oil and gas support, as well as a variety of other applications.

Helicopters are used for a variety of operations, each of which presents unique challenges. For example, helicopter emergency medical services (HEMS) operators transport seriously ill patients and donor organs to emergency care facilities, often creating pressure to conduct these operations safely and quickly in various environmental conditions, such as in inclement weather, at night, or at unfamiliar landing sites for helicopter operations. Air tour operators and law enforcement support operators face similar obstacles. On September 24, 2004, in Kalaheo, Hawaii, the pilot of a non-stop sightseeing air tour flight lost control of his helicopter after flying into a turbulent area with reduced visibility leaving him disoriented. And, in June 9, 2009, in Santa Fe, New Mexico, a helicopter operated by the New Mexico State Police on a search and rescue mission crashed after the pilot decided to take off from a remote, mountainous landing site on a dark, windy night.

These and other operational issues have led to an unacceptably high number of helicopter accidents. In the last ten years, 1,470 accidents occurred involving helicopters used as air ambulances, for search and rescue missions, and commercial helicopter operations such as tour flights. As a result of those crashes 477 people lost their lives and 274 were seriously injured. There is no simple solution for reducing helicopter accidents but safety improvements to address helicopter operations have the potential to mitigate risk to thousands of pilots and passengers each year.



Photo of a Bell 214ST helicopter after it impacted terrain on July 25, 2007 northeast of McCall, Idaho.

What can be done?

The NTSB is concerned that these types of accidents will continue to occur if a concerted effort is not made to improve the safety of helicopter operations. This will require increased awareness among, and action by, key stakeholders such as the helicopter manufacturers, helicopter operators, and training and regulatory agencies.

Helicopter operators should develop and implement safety management systems that include sound risk management practices, particularly with regard to inspection and maintenance. Best practices for maintenance personnel should also include duty-time regulations that take into consideration factors such as start time, workload, shift changes, circadian rhythms, adequate rest time, and other factors shown by recent research, scientific evidence, and current industry experience to affect maintenance crew alertness. Specific to HEMS operations is the need for flight risk evaluation programs and formalized dispatch and flight-following procedures.

Operators should also make sure that their pilots have access to training that includes scenarios such as inadvertent flight into instrument meteorological conditions and autorotation. When an accident occurs, the presence of a crash-resistant flight recorder systems will assist investigators, regulatory agencies, and operators in identifying what went wrong and how to keep it from happening again.

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What is the NTSB doing?

Over the last 10 years, the NTSB has investigated numerous helicopter accidents and issued over 100 safety recommendations on helicopter-specific issues. Recent NTSB investigations of accidents involving helicopters include the June 2009 accident near Santa Fe, New Mexico, involving a helicopter operated by the New Mexico State Police on a search and rescue mission; the August 2011 accident near Mosby, Missouri, involving a helicopter operated by Air Methods Corporation on a medical transport flight; and the December 2011 accident near Las Vegas, Nevada, involving a helicopter operated by Sundance Helicopters on an air tour flight. These three accidents alone resulted in the issuance of 27 safety recommendations pertaining to safety issues that include risk management, pilot training, maintenance, and flight recorders.

In February 2009, prompted by a rise in the number of fatal HEMS accidents, the NTSB held a 4-day public hearing to address the issues associated with HEMS safety. The hearing called upon 41 expert witnesses, representing 8 HEMS operators, 12 associations, 6 manufacturers, and 4 hospitals.

In 2011, the NTSB convened a public forum Oversight of Public Aircraft Operations: Ensuring Safety for Critical Missions. The forum addressed oversight of public aircraft, including helicopter operations.

The goals of the forum were to

1. raise awareness of the importance of effective oversight in ensuring the safety of public aircraft operations;
2. identify where responsibility lies for oversight of public aircraft operations; and
3. facilitate the sharing of best practices and lessons learned across a number of parties involved in the oversight of public aircraft operations.

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National
Transportation
Safety Board

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in other modes of transportation - railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.

