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Fatal Aviation Crashes in Alaska – A Need for Renewed Caution and Diligence

Background

During 1990–1999, Alaska experienced 1,684 aviation crashes, an average of one crash every 2 days. Of these crashes, 188 (11.2%) were fatal, resulting in 402 deaths.¹ Since the 1990s, federal and state agencies and non-profit organizations have made cooperative efforts to improve aviation safety in Alaska by installing weather cameras, implementing programs such as the Capstone Program (a federally-funded safety program that provided information about traffic and terrain features to improve pilots' situational awareness), and creating organizations like the Medallion Foundation (a non-profit organization that promotes aviation safety by providing resources, training and support to the aviation community).

This review of Alaska aircraft crash data was prompted by the recent air transportation tragedies in 2010. Preliminary information for crashes occurring in 2009 and 2010 may change as reports become finalized.

Methods

Investigation reports from the National Transportation Safety Board were used to identify fatal aviation crashes that occurred in Alaska during January 1, 2000 through September 1, 2010.² These reports include information on crash circumstances, aircraft, pilots, and a narrative that outlines factors contributing to the crash.

Results

During 2000–2009, 103 civilian fatal aviation crashes occurred in Alaska, resulting in 33 serious injuries and 228 fatalities. These crashes involved 104 aircraft (including one midair collision), of which 96 were fixed wing, seven were rotorcraft, and one was a gyroplane. Compared to 2000–2004, the number of fatal crashes and fatalities that occurred during 2005–2009 decreased (Table). Thus far in 2010, 19 people (11 pilots and 8 passengers) were fatally injured and eight people (1 pilot and 7 passengers) were seriously injured in 10 civilian fatal aviation crashes; these numbers exceed the average number of annual fatalities and crashes during 2005–2009. At the time of this report, one additional airplane was reported as missing in 2010; its pilot and three passengers have not been found.

Table. Fatal Aviation Crash Comparisons — Alaska, 2000–2004, 2005–2009, and 2010*

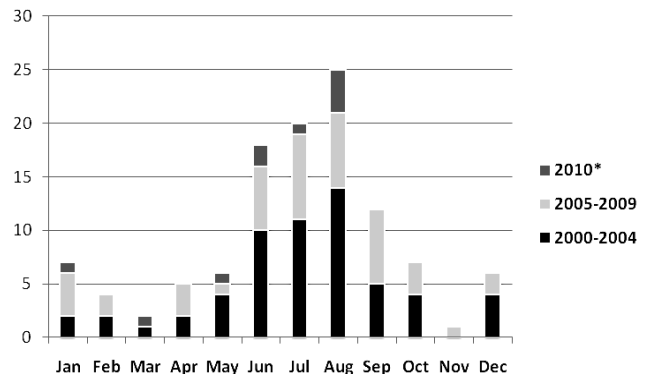
Event	2000–2004	2005–2009	2010*
Fatal Crashes	59	44	
Average per year	12	9	
Fatalities	134	94	
Average per year	27	19	
Fatal Crashes January–August	9 per year [†]	6 per year [†]	10
Fatalities January–August	19 per year [†]	14 per year [†]	19

*Based on information available as of September 1, 2010

[†]Average for 5-year interval

Seventy-one percent of fatal crashes from 2000–2009 occurred from May to September (Figure). August 2010 had the most fatalities (n=12) of any August during 2000–2010; 2002 also had four fatal crashes in August, but had seven fatalities. In 2007 there were three fatal crashes in August with 11 fatalities. Twenty percent of all fatal crashes that occurred during 2000–2009 occurred in August.

Figure. Fatal Aviation Crashes by Month — Alaska, 2000–2010*



*Based on information available as of 9/1/2010

Discussion

This review demonstrates that the number of aviation crashes and fatalities from 2000–2004 to 2005–2009 has declined; however, the number of fatal crashes and fatalities between January–August 2010 were higher than the corresponding average numbers from 2005–2009. The reasons for this increase are currently unclear since investigations are ongoing. However, stable weather systems in the Northern Hemisphere resulted in persistent weather in many locations and produced one of the coldest, gloomiest, and wettest summers on record for Southcentral Alaska.³ In addition to creating a crash hazard, the long stretch of poor weather may limit opportunities for pilots to remain proficient. Pilot hours may be further reduced due to financial constraints and the high price of aviation fuel, which may also contribute to decreased proficiency. Efforts should continue statewide to prevent aviation crashes and associated fatalities by promoting safe flight.

Recommendations

1. Governmental and non-governmental agencies should continue to focus on crash prevention in Alaska through efforts such as the Medallion Foundation's simulators and training programs and Federal Aviation Administration and Alaskan Aviation Safety Foundation-sponsored safety seminars.
2. Weather information should continue to be enhanced and made easily available for pilots (there are currently 140 weather cameras installed throughout Alaska with a total of 221 planned statewide by 2014).
3. Beginning in 2020, all aircraft will be required to have Automatic Dependent Surveillance-Broadcast (ADS-B) equipment (similar to equipment used in the Capstone Program) installed in their aircraft in order to fly in airspace above 18,000 feet, in airspace near major airports, and in airspace of airports with both operational control towers and radar approach control (i.e., Class A, B and C airspace). In order to improve safety of operations, all aircraft owners and operators in Alaska should be encouraged to outfit their aircraft with ADS-B equipment, regardless of their intent to fly in Class A, B, and C airspace.

References

1. CDC, *Surveillance and Prevention of Occupational Injuries in Alaska: A Decade of Progress, 1990-1999*. Cincinnati, OH:NIOSH; 2002. DHHS Publication No. 2002-115.
2. National Transportation Safety Board Accident Database. Accessed Sept. 1, 2010. Available at: <http://www.ntsb.gov/ntsb/query.asp>
3. Halpin J. Yes, agrees Weather Service, it's been a miserable summer. *Anchorage Daily News*. August 13, 2010.