



February 3, 2020

TO: Senate Commerce Committee

FROM: Paul Hudson
President, FlyersRights.org
Member, FAA Aviation Rulemaking Advisory Committee (ARAC) (1993-present)

RE: Helicopter Safety: Kobe Bryant and hundreds of others have died due to FAA failure and refusal to require basic safety features

Thank you for inviting me to brief you on this important and long overlooked deficiency in aviation safety.

Helicopter vs Fixed Wing Aircraft Safety

The FAA, NTSB, helicopter manufacturers, and many experts have known for decades that the accident and death rate from helicopter crashes far exceeds fixed wing commercial aircraft by about 100 fold. If the same accident and death rates for helicopters were the case for commercial airliners, there would be about 1,000 fatal accidents annually instead of zero to five. (See minutes of FAA ARAC meeting 9/17/2015, copy enclosed.) We estimate about 50 avoidable deaths occur annually from helicopter crashes.

The reasons for this include that helicopters fly lower, and when power is lost, they plummet rather than glide to a crash landing.

Brief History of FAA Helicopter Safety Standards and Enforcement

There are 5 safety measures that have been recommended by FAA and NTSB safety experts that the FAA has failed to require for over 20 years, even when ostensibly promulgated as regulations.

1. A common cause of fatal air crashes has been crashing into mountains in bad weather (controlled flight into terrain or CFIT in FAA jargon). This type of crash has been virtually eliminated for fixed wing commercial air transportation by requirements that airliners be equipped with ground warning systems or TAWS (terrain awareness warning systems). But not for helicopters or general aviation aircraft. In 2006, the NTSB recommended to the FAA that TAWS be required for all turbine helicopters (A-06-19), but the FAA failed to act on this

recommendation and ignored the danger that is likely responsible for the death of Kobe Bryant and many others. See NTSB/AAR-06/02, copy enclosed.

2. The number one cause of death and horrible disfiguring injuries in helicopter crashes is fuel tank fires which can be largely prevented with fuel tank bladders. (See FAA 1994 standard 14 CFR 27.952, and NTSB A-15-12 for newly manufactured helicopters.) However, this measure was largely unimplemented due to grandfathering and exemptions granted by FAA so by 2014 only 16% of helicopters manufactured 1994-2014 have this fire prevention feature. Even fewer older helicopters, like the one flown by Kobe Bryant, have this safety feature.
3. Another major cause of helicopter crash deaths and injuries is attributed to impact trauma, often from the overhead motor crashing into the occupant compartment, crushing those who might otherwise survive impact. The FAA again failed to implement and enforce its own standards issued in 1984, 1989, 1994, 1998.
4. The third major cause of helicopter crash deaths is drowning from water landings as helicopters sink quickly and flip over unless buoyed. Occupants drown unless they can quickly escape. Again the FAA has failed and refused to enforce this standard.

See 14 CFR 27.561, 27.562, 27.785, 27.952

5. In addition, there is no effective requirement for black box data and voice recorders. This requirement would enable NTSB and others to determine the cause of crashes as it does for other commercial aircraft crashes. There was no black box on the Kobe Bryant helicopter.

What should be done now

The FAA has a long history of non-enforcement. Unless reversed in the next few weeks by Administrator Dickson, the FAA's history of non-enforcement or "regulation by permission of the regulated" should result in Congressional hearing and remedial legislation.

Specifically, FlyersRights.org has called for immediate grounding of all passenger-carrying helicopters without TAWS and fuel fire bladders and restricted use of all helicopters to fly in only good weather without TAWS and fuel fire bladders. As to other measures, the FAA needs to require better flotation and escape methods and pilot training, as well as water escape drills for passengers for helicopters carrying passengers over water bodies. This should occur in 2020. Congress should provide the FAA with a supplemental appropriation and mandate for FY 2019-20 to carry on these essential safety measures.

Enclosures:

1. Relevant Regulations: 14 CFR 27.561, 27.562, 27.785, 27.952
2. NTSB Accident Report NTSB/AAR-06/02 March 7, 2006 (TAWS recommendation on pg. 60) <https://www.nts.gov/investigations/AccidentReports/Reports/AAR0602.pdf>
3. NTSB-FAA correspondence re: 2006 NTSB recommendation re: TAWS (Safety Recommendations A-06-15 and A-06-19) implementation
https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=A-06-015
https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=A-06-019
4. NTSB-FAA correspondence re: 2015 NTSB recommendation re: CRFS (crash resistant fuel systems) (Safety Recommendation A-15-12) implementation
https://www.nts.gov/_layouts/nts.recsearch/Recommendation.aspx?Rec=A-15-012
5. FAA ARAC September 2015 Meeting Minutes-creation/tasking of ROPWG and FAA Presentation by Martin Crane note: We cannot locate Martin Crane's presentation, but it is summarized in the minutes on pg. 12-13.
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC.Meeting.Minutes.9.17.15.pdf
6. FAA ARAC March 2018 Meeting Minutes and June 2018 ROPWG Report
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC%20June%202018%20Meeting%20Packet.pdf
7. FAA ARAC June 2018 Meeting Minutes
[https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC%20Meeting%20Minutes%20-%20June%202018%20\(Ratified%20Minutes\).pdf](https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC%20Meeting%20Minutes%20-%20June%202018%20(Ratified%20Minutes).pdf)
8. FAA ARAC Rotorcraft Occupant Protection Working Group (ROPWG) Report September 2018
https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ROPWG%20Task%206%20Final%20Report%20Revised%202018-09-27.pdf
9. Manufacturer Statements of Dissent, pg. 105 of ROPWG Report September 2018
10. FAA ARAC September 2018 Meeting Minutes showing discussion and vote
[https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC%20Meeting%20Minutes%20-%20September%202018%20\(draft%2011-28-18\).pdf](https://www.faa.gov/regulations_policies/rulemaking/committees/documents/media/ARAC%20Meeting%20Minutes%20-%20September%202018%20(draft%2011-28-18).pdf)
11. FlyersRights.org Press Release March 2018 re: CRFS vote
12. FlyersRights.org Letter to FAA December 2018 re: CRFS
13. Links to Helicopter Crash Videos