HELICOPTER SAFETY NEWS

Sept. 26, 2017

U.S. Helicopter Safety Team Releases Details on Proposed Safety Enhancements Focused on Reducing Fatal Helicopter Accidents

WASHINGTON DC – The U.S. Helicopter Safety Team (www.USHST.org) has completed its comprehensive analysis of the root causes of fatal accidents and has developed 22 measurable safety enhancements aimed at reducing fatalities.

Detailed descriptions for 18 of the proposed safety enhancements can now be found on the USHST web site. [http://www.ushst.org/MobilApp.aspx] The descriptions offer information on the Statement of Work, expected implementers, potential obstacles, future actions, and a proposed timetable.

The safety enhancements can be grouped into four categories:

- IMC and Visibility   Four safety enhancements
- Loss of Control   Five safety enhancements
- Safety Management   Seven safety enhancements
- Competency   Six safety enhancements

As work on the safety enhancements moves forward, the initial focus will target four specific sectors of the industry: Personal/Private, Air Ambulance, Commercial, and Aerial Application. Teams of industry and government safety experts are being formed for each proposed enhancement and work in each area is expected to run from one to four years. Here are summaries of the proposed initiatives:

Flying Blind: A Closer Look at Visibility Problems

- Detection and Management of Risk Level Changes

Action: Develop and promote recommended practices for pilot and nonflying crewmembers to 1) detect increased risk levels during the course of a flight, 2) effectively communicate the increased risk level to each other, 3) and make a decision on the appropriate risk mitigation.

- Threat and Error Management Training

Action: Develop best practices for, and promote the teaching of Threat and Error Management (TEM) as part of initial and recurrent pilot training.

- Enhanced Helicopter Vision Systems

Action: Research, develop, and promote the use of enhanced helicopter vision systems (EHVS) technologies (e.g. Night Vision Goggles, Enhanced Vision Systems, Synthetic Vision Systems, Combined Vision Systems, etc.) to assist in recognizing and preventing unplanned flight into degraded visibility conditions due to weather and to increase safety during planned flight at night.

- Recognition & Recovery of Spatial Disorientation

Action: Develop training for recognition of spatial disorientation and recovery to controlled flight. Emphasize the use of all available resources installed on the aircraft, including automation such as increased use of autopilot.

Out of Control: The Need for Stability in Our Skies

- Standardization of Autorotation & Emergency Handling Training

Action: Convene team of training industry experts to develop consensus on recommended practices for standard training of the Certified Helicopter Flight Instructor on autorotations and emergency aircraft handling.

- Progressive Approaches to Autorotation Training

Action: Amend the Helicopter Flying Handbook (FAA-H-8083-21A) to incorporate progressive approaches to training autorotations.

- Simulators and Outside-the Envelope Flight Conditions

Action: Provide recommendations for improving simulator mathematical physics models for level A-D Full Flight Simulators (FFSs) and Level 1-7 Aviation Training Devices (ATDs) for outside-the-envelope flight conditions.

- Stability Augmentation System/Autopilot

Action: Encourage the development and installation of a stability augmentation system (SAS) and/or simple autopilot in light helicopters.

- Understanding of Basic Helicopter Aerodynamics

Action: Review and revise materials explaining basic helicopter aerodynamics to emphasize recognition of unsafe aerodynamic situations and apply appropriate corrective actions.

Your Risky Business: Pushing for More Safety Management

- The Final Walk Around

Action: Develop guidelines and recommended practices for helicopter preflight inspection, final walk around, and post flight inspection and promote the recommended practices to the training community and general pilot community.

- Pre-Flight Risk Assessment for Student Flights

Action: Provide recommended practices to instructors for pre-flight risk assessment of student flights.

- Flight Data Monitoring

Action: Promote the installation and use of data recording devices (e.g. HFDM, camera recording) for purposes of: 1) detection and monitoring of aircraft and engine limitations that were exceeded, 2)

collecting and preserving more data relevant to accident investigation, 3) detecting and correcting procedural noncompliance.

- **Full Authority Idle Protection Devices**

Action: Encourage the development and installation of Full Authority Idle Protection devices to prevent unintended loss of engine power.

Aim for Excellence: Lives Are in Your Hands

- **Development of Airman Certification Series for Rotorcraft**

Action: Develop and publish the new Airman Certification System (ACS) Rotorcraft-Helicopter series to replace the current Practical Test Standards (PTS) for internal and external industry stakeholders for airman certification.

- **Simulations for Safe Decision Making**

Action: Increase the use of relevant simulation to rehearse at-risk scenarios to educate and to develop safe decision-making.

- **Competency-Based Training and Assessments**

Action: Provide guidance on improved initial helicopter pilot training to competency in the following areas: 1) aircraft performance and limitations; 2) in-flight power and energy management training, to include prevention and recovery, if required, from settling with insufficient power; 3) basic maneuvers not defined in current guidance but essential to positive aircraft control; 4) threat and error management; 5) mission planning; 6) aircraft systems; and 7) familiarity with the Pilot Operating Handbook.

- **Make & Model Transition Training**

Action: Improve make and model transition by ensuring familiarity and the understanding of new "model specific" equipment.

- **Safety Culture and Professionalism**

Action: Develop a definition of an effective safety culture that is more applicable and relatable to the day-to-day work of frontline helicopter professionals. Once developed, promote an understanding of this application-based definition to the helicopter community.