

## 1. Helicopter Safety Enhancement Description

A summary of the the Helicopter Safety Enhancement (H-SE) is provided in the table below:

*Table 1: H-SE Summary*

Category	Description
<b>H-SE Number</b>	23-01
<b>H-SE Title</b>	Professional Preflight Planning & Go/No-Go Aeronautical Decision Making (P3-GADM)
<b>Lead Organization</b>	Helicopter Association International (HAI) Safety Working Group
<b>H-SE Co-Focals</b>	Steve Martorano (Plus North America) and Eric Hamp (Blue Hawaiian)
<b>Start Date</b>	May 1, 2023
<b>Planned Completion Date</b>	May 1, 2024

## 2. Statement of Work

The primary objective of this safety enhancement is to help prevent fatal helicopter accidents that can be directly or indirectly linked to preflight judgment errors, decision-making errors, and inadequate mission planning. The H-SE team led by the HAI Safety Working Group will develop and deliver are sources that will likely include policies, procedures, practices, tools, and other resources/tools that when implemented correctly, can prevent future fatal rotorcraft accidents attributable to flawed, inappropriate, and unauthorized preflight GO/NO-GO decisions. To frame the objective in a more positive manner, the team seeks to make it easier for flight planners to make well-informed GO/NO-GO decisions that are correct, appropriate, authorized before every flight, and independent from potential internal or external pressures, influences, or other factors.

### 2.1 Background

The USHST reviewed fatal accidents between 2009-2013, and 2014-2020 and determined that several likely directly or indirectly involved inadequate or lack of pre-flight risk assessments (including performance planning deficiencies) as a contributing factor. The

USHST determined that the following NTSB accident reports likely contained the linkage to inadequate or lack of pre-flight risk assessments.

- 2009-2013 Analysis: CEN11FA507, WPR13FA343, CEN13FA010
- 2009-2013 Analysis: ERA15FA178, WPR15LA193, WPR16FA029, WPR16FA040, CEN16FA315, CEN17FA100, CEN17FA103, ERA17FA190, WPR18FA074, WPR18MA087, CEN18FA391, ERA19FA035, WPR19FA148, CEN19FA185, ERA19FA210, ANC20MA010, DCA20MA059, ERA20LA220

The following two tables further detail USHST’s identification of standard problem statements derived from these analyses indicating a direct or indirect linkage to deficiencies in planning or go/no-go decision making.

*Table 2: Standard Problem Statement with Direct Linkage to Planning Go/No-Go Decisions*

Standard Problem Statement (SPS)	Times Used
Pilot - Fatigued.	21
Pilot - Lack of mission planning/risk assessment.	18
Pilot - Failed to establish/adopt appropriate personal limitations/minimums.	13
Management - Customer/company pressure to fly.	10
Pilot - Physiological conditions led to potential impact on pilot's performance.	8
Pilot - Inadequate performance planning prior to flight.	5
Pilot - Intentional non-compliance or reckless behavior. "Disqualifying" prescription drugs.	5
Pilot - Self induced pressure to fly (or continue flight).	4
Infrastructure - Inadequate weather reporting capability in remote operating areas.	3
Pilot - Failed to obtain official weather report.	2
Management - FRAT form did not reflect dark night risk ranking.	1
Operations - OCC inability to provide real time weather update to pilot and/or aircraft.	1
Pilot - Failed to perform mission specific briefing.	1
Pilot - Did not self regulate in regards to fitness for duty.	1
Pilot - Intentional non-compliance or reckless behavior. Illicit drugs.	1
Pilot - Intentional non-compliance or reckless behavior. OTC drugs on FAA unapproved fly list.	1
<b>Total</b>	<b>95</b>

Table 3: Standard Problem Statement with *Indirect* Linkage to Planning Go/No-Go Decisions

Standard Problem Statement (SPS)	Times Used
Management - Lack of adequate/effective safety management program.	26
Pilot - Failed to adequately manage risk.	12
Pilot - Continued VFR flight into IMC.	12
Pilot - False sense of confidence leading to deterioration of awareness and error management.	9
Pilot - Inability to detect and avoid weather below minimums.	8
Operations - Mission is pilot intensive creating fatigue.	5
Pilots - Non IFR certified or current pilot initiated flight into forecast MVFR conditions in a helicopter not certified for IFR flight (VFR as basis of operation).	5
Operations - Inadequate CRM between non-flying crew members to pilot regarding potential unsafe issues	3
Pilot - Failed to appropriately manage aircraft performance resulting in aircraft settling with insufficient power to recover.	3
Pilot - Failed to recognize hazardous condition due to lack of knowledge/awareness of aircraft limitations or operating envelope.	3
Management - Poor safety culture.	2
Operations - Lack of company defined mission specific profiles.	2
Pilot - Poor safety culture.	1
Pilot - Flying with expired medical.	1
Pilot - Limited training for specific mission.	1
Total	93

## 2.2 Planned Milestones

The following milestones summarize the projected timelines, activities, outputs for this safety enhancement project.

### 2.2.1 Milestone 1

**1 May – 14 September 2023: Develop Work Plan / Conduct Preliminary Research:** Identify existing data, tools, and resources that can enhance informed and professional preflight planning and aeronautical decision making for pilots, mission planners, dispatchers, owners, operators, and other potential stakeholders. While not the sole focus of the research, particular interest should be placed on performance planning. Source materials may include but will not be limited to the following:

- US Helicopter Safety Team ([USHST](#))
- Vertical Aviation Safety Team ([VAST](#))
- Helicopter Association International ([HAI](#))

## Helicopter Safety Enhancement Work Plan

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- SKYbrary Aviation Safety ([SKYbrary](#))
- Federal Aviation Administration Safety Team ([FAASTeam](#))
- European Safety Promotion Network Rotorcraft ([ESPN-R](#))
- Other relevant safety-focused resources

### 2.2.2 Milestone 2

**15 September – 31 October 2023: Conduct Gap Analysis:** Assess existing data, tools, and resources that can enhance informed and professional preflight planning and aeronautical decision making for pilots, mission planners, dispatchers, owners, operators, and other potential stakeholders.

### 2.2.3 Milestone 3

Identify and Develop Solutions/Outputs (1 Nov 2023 – 31 Mar 2024)

### 2.2.4 Milestone 5

Promote Solutions/ Outputs (1 – 30 April 2024)

### 2.2.5 Sustainment

Pursue continuous improvement and outreach opportunities (1 May 2024 – 1 May 2025)