



USHST

United States Helicopter Safety Team
Our Vision: A Civil Helicopter Community With Zero Accidents



Precautionary Landings

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How do I know when it is best to land?

The Helicopter Association International (HAI) recently launched the “**Land and Live**” program. The Precautionary Landings Safety Bulletin is designed to support this initiative by offering suggestions on how training sessions can be designed to assist helicopter pilots in making decisions to discontinue a flight when conditions start to deteriorate

Perceptions

Many pilots have perceptual fears for discontinuing a flight, rather than focusing on the negative consequences of continuing a flight under frail conditions. In certain scenarios, false perceptions can be a strong influencer over better pilot judgment. The following perceptual fears have been cited as having caused helicopter pilots to press on, rather than to discontinue by executing a precautionary landing to allow adequate time to consider their options in response to changing conditions.

- Fear of ridicule
- Fear of punitive action
- Fear of FAA enforcement
- Fear of the inconveniences
- Fear of losing personal pride/ego

Most of these fears can be eliminated by having a training culture that promotes safety above all else. In order to achieve a successful training culture such as this, all stakeholders including students, flight instructors, maintenance personal and management must be actively engaged to ensure its success.

Mission Accomplished

The feeling of “accomplishing a mission” can be a double edged sword when it comes to developing a safety-minded pilot. A mission-minded pilot can accomplish high levels of satisfaction while progressing through training; however, a “mission mindset” can also be detrimental if the pilot has not thought through the basic elements of conservative Aeronautical-Decision-Making (ADM). Pilot perspective is greatly diminished when the focus is placed on achieving the mission verses how can the mission be achieved with safety set as the highest priority.



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What the Rotorcraft Flight Manual Says...

What does the RFM say about landing with an emergency? What does **Land Immediately** mean? Each manufacturer will define these actions in different ways so you are best to follow their advice for the aircraft that you fly, but let's look at 3 generic definitions:

Land Immediately – continued flight may be more hazardous than ditching or landing in terrain normally considered unsuitable.

Land As Soon As Possible – Land at the nearest site at which a safe landing can be made.

Land As Soon As Practical – Extended flight is not recommended. The landing site and duration of flight are at the discretion of the pilot in command.

It is entirely possible that an “emergency” that may start off as “Land As Soon As Practical” could escalate to “Land As Soon As Possible” very quickly, and every pilot needs to have the mind-set to be able to adapt or modify his or her decision to land as circumstances change. This could mean landing a mile short of the airport if you could run out of fuel (for example).



Prevention: An Ounce Goes a Long Way

It's challenging, if not impossible, to quantify all the benefits realized from preventative actions taken by helicopter pilots each day. Considering the countless hours spent preparing for each flight, it's simply impossible to comprehend the effects this has on safety. Imagine if it were possible to assign a dollar value to all the efforts spent conducting detailed pre-flight inspections, obtaining thorough weather briefings, and all the other safety precautions taken by pilots each day? Unfortunately, many helicopter pilots discount the benefits of doing these safety-minded tasks and choose not to go the extra mile. This is a dangerous mindset, because complacency kills!

Investing extra time triple checking all flight parameters, before launching on a training session, often pays huge dividends. Risk Management strategies integrated into a robust Safety Management System (SMS) will yield positive results for any pilot or organization valuing safety as their #1 priority.

Embracing the Safety Culture

The notion that success breeds complacency is certainly true as it pertains to helicopter flight. Safety Management takes commitment and perseverance at all levels of the flight training organization. It's a lofty goal to expect helicopter pilots to utilize conservative decision making and make precautionary landings without knowing they have management's backing 100%.

Emphasis should be placed on the importance of teaching pilots that “NO” is an acceptable answer. When in doubt, pilots should be

encouraged to use conservative decision making that might involve a precautionary landing to reevaluate weather or a mechanical or operational issue. As the old saying goes.....

.....it's better to be on the ground wishing you were in the air than to be in the air wishing you were on the ground.

An Emergency Response Plan (ERP) details recovery plans for helping flight crews involved in precautionary landings and is an excellent reflection of expectations should conditions warrant such action. A pilot may expose the people on board the aircraft, on the ground, their company, and others to new risks by performing a precautionary landing and a good ERP can help organizations quickly manage these risks. Regular ERP exercises will help build confidence with all parties that the risk presented can be mitigated.



Summary

Precautionary landings are an effective way for helicopter pilots to buy time to reevaluate flight conditions. Pilots who understand their aircraft systems, follow SOPs, and use conservative risk management techniques will mitigate unfavorable circumstances from further deteriorating...**by landing the helicopter!** Professionals at all levels of the organizations have a vested interest in ensuring passenger and crew member safety by being proactive without fear of recourse. Do the “Right Thing” by breaking the accident chain long before it's too late!

This document is a peer reviewed publication by an expert panel of the IHST Implementation Team. More information about the IHST, its reports, its safety tools, and presentations can be obtained at its web site: (www.IHST.org) or at (www.USHST.org). Or download the App from the Apple or Google Store.

