



LANDING ZONE TRAINING





DISCLOSURES

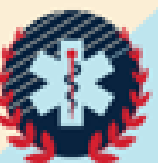
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OBJECTIVES

By the end of this presentation, you will be able to:

- ▶ Demonstrate how to select a landing zone;
- ▶ Demonstrate how to set up the landing zone;
- ▶ Verbalize how to communicate with the aircraft;
- ▶ Verbalize how to relay landing zone information and directions;
- ▶ Demonstrate and verbalize the hazards around the aircraft;
- ▶ Verbalize what to do if a crash occurs; and
- ▶ Verbalize what helicopter shopping is and how to avoid issues related to helicopter shopping.



CAMTS ACCREDITATION

- ▶ All AMC bases are required to be CAMTS accredited as Critical Care Providers
- ▶ Voluntary accreditation that sets high standards for training, patient care, peer review, documentation auditing, dispatching procedures, emergency operations, day-to-day operations, and much more.



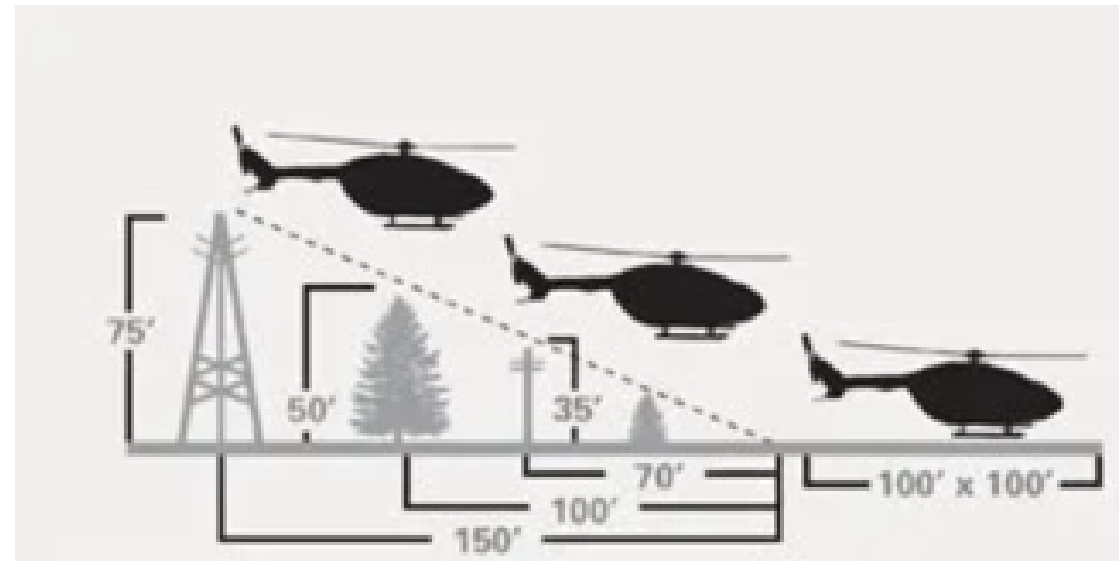


SELECTING & SETTING UP A LANDING ZONE



SELECTING A LANDING ZONE

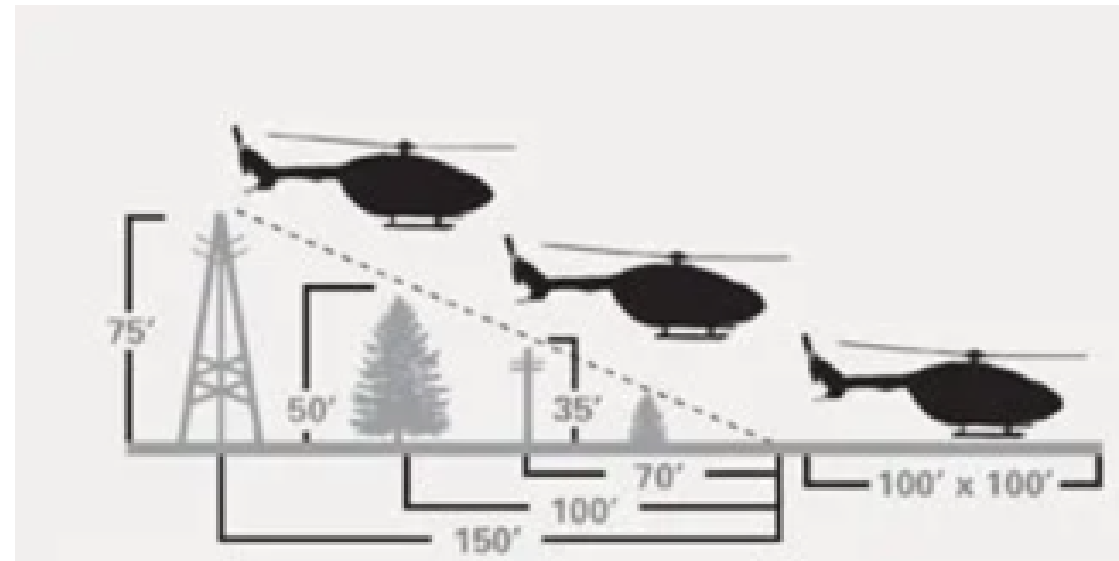
- ▶ 100' x 100' LZ – 15' x 15' touchdown area
- ▶ Relatively smooth (no ruts, stumps, etc.)
- ▶ Free of loose debris and obstacles
- ▶ Surface slope of 10° or less
- ▶ Grass below knee height
- ▶ Clear of overhead wires and obstructions
- ▶ Clear arrival and departure path





SELECTING A LANDING ZONE

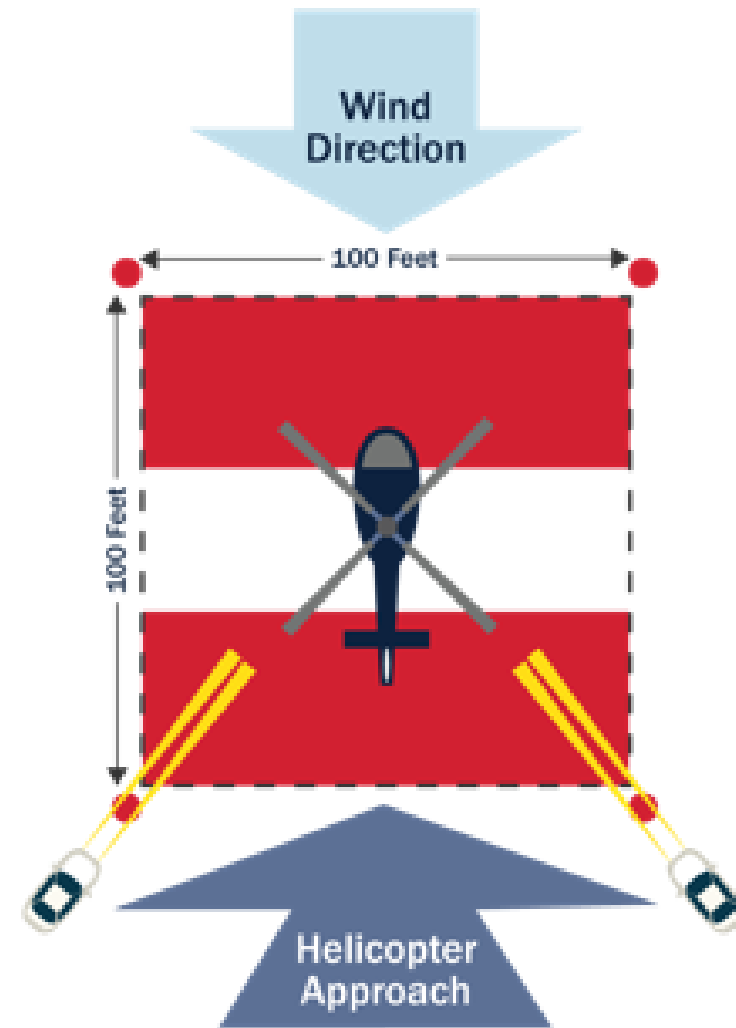
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SETTING UP A LANDING ZONE

- ▶ Determine the wind direction
- ▶ Face where the helicopter will land with your back to the wind
- ▶ Place marker between your feet
- ▶ Place a marker 20 paces to your left & 20 paces to your right
- ▶ Place markers in the opposite corners to form a square
- ▶ To illuminate the LZ at night, position two vehicles as shown
- ▶ The marker between your feet tells the pilot where the wind is coming from





COMMUNICATING WITH THE AIRCRAFT



COMMUNICATING WITH THE HELICOPTER



Radio Frequencies

Make sure you are on the radio frequency given to Air Methods Communications Center (AirCom)

Based on Location



Prepare a LZ Description

Note overhead obstructions and wires

Surface wind



DIRECTING THE HELICOPTER

WHEN YOU COMMUNICATE WITH A HELICOPTER PILOT:



Use common
language



Anticipate the
direction of arrival



Let the pilot know
when you first hear
the helicopter

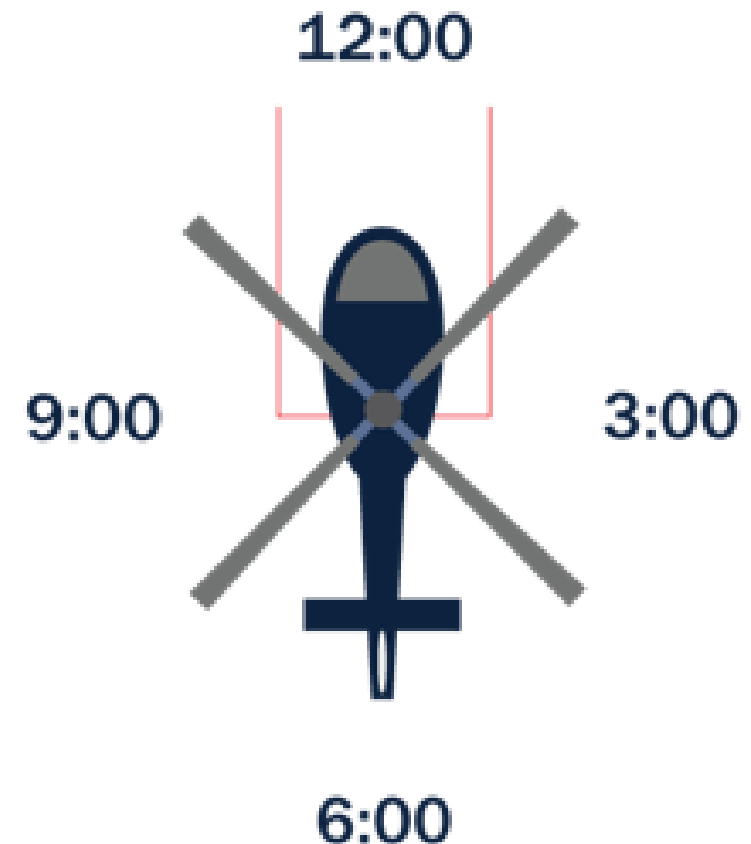


Tell the pilot when
you can see the
helicopter



IDENTIFYING YOUR POSITION

- ▶ When talking to the aircraft, reference the **HELICOPTER** position as a clock.
- ▶ “I am at your 1 o’clock position, 1000 meters.”
- ▶ When a helicopter flies over you, **YOU** go from his 12 o’clock to his 6 o’clock.
- ▶ Just because you see us, doesn’t mean we see you.





GIVING LANDING ZONE INFORMATION

- ▶ **“(Aircraft name), this is** (LZ Command)
- ▶ **The landing zone is a** (road, school parking lot, field)
 - **Surrounded by** (trees, wires, buildings, fences)
 - **Approximately** (give dimensions)
 - **Marked by** (cones, lights, strobes)
- ▶ **Obstacles / hazards in the area are** (wires, light standards, radio towers) to the (compass direction).
- ▶ **Surface wind is** (calm, light, gusting) **from** (compass direction).
- ▶ **Clearest path of approach is from the** (compass direction).”
- ▶ **Other aircraft on scene or inbound**

Phrase to stop the aircraft movement:

STOP, STOP, STOP!



Multiple Aircraft Scenes

- ▶ **Communicate presence of other aircraft during LZ brief**
- ▶ **Entire area should be considered an LZ**
- ▶ **Do NOT walk between or behind ANY aircraft in the LZ**





LANDING ZONE SAFETY



HAZARDS AROUND THE AIRCRAFT



Bystanders should be kept at least 100 feet away from the LZ



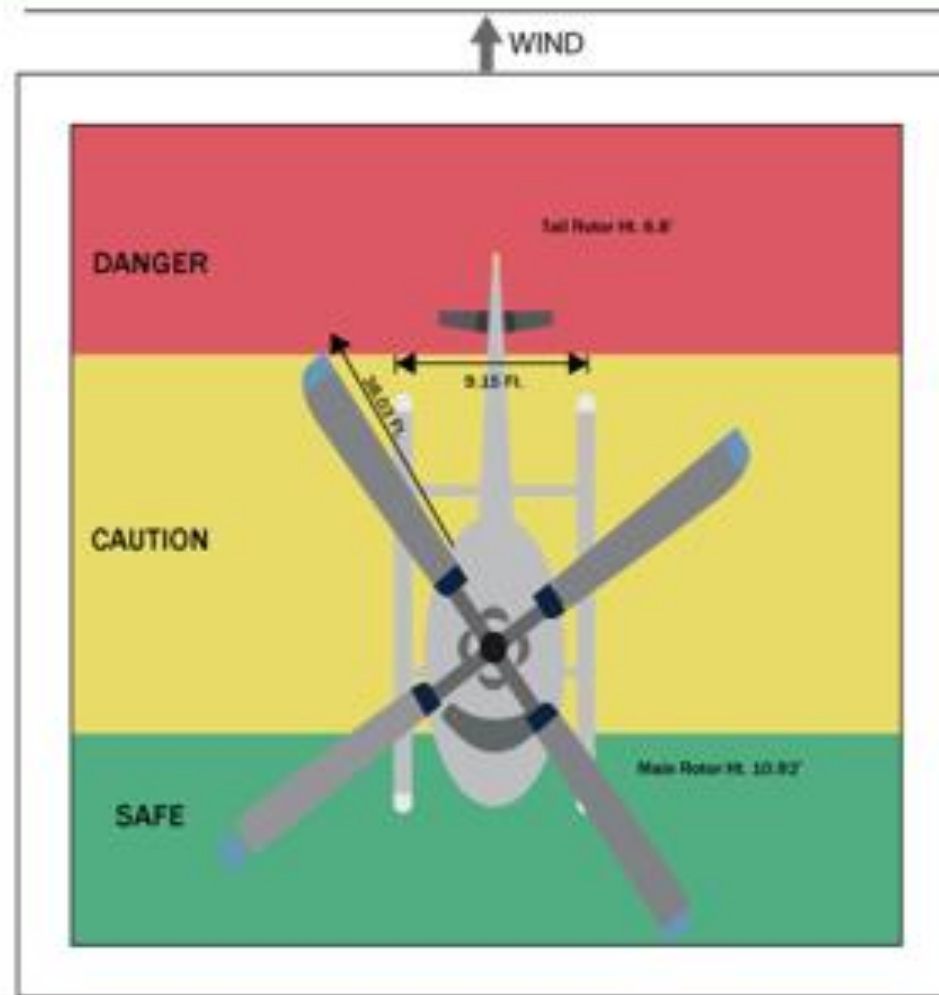
Clear loose debris/material that rotor wash will blow



Protect your eyes
Sand, dust, and snow will blow around

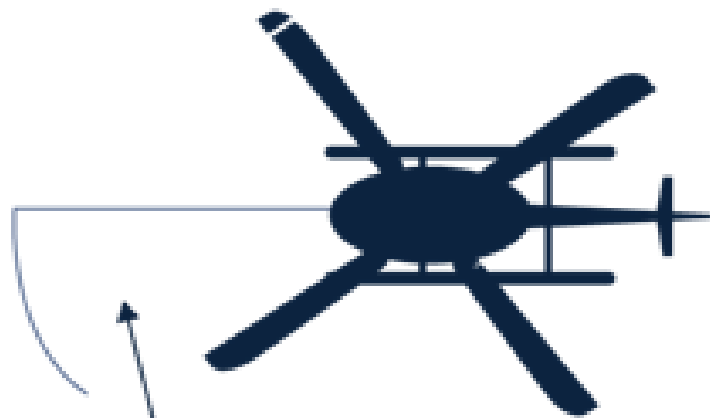


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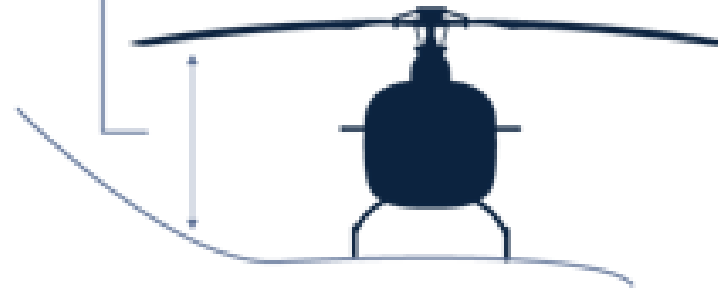
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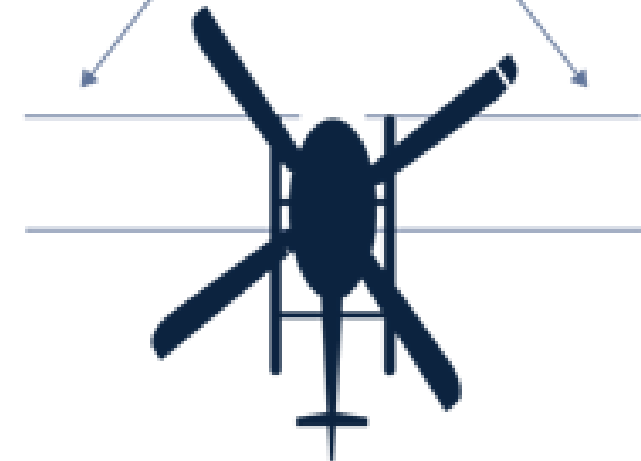
CAUTION: REDUCED
CLEARANCE IN THIS
AREA



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CLEARANCE IN THIS
AREA



APPROACH THE
HELICOPTER FROM
THIS AREA





HAZARDS AROUND THE AIRCRAFT



Hearing protection



If you observe a hazard
around/near the
helicopter, **SPEAK UP**



After landing the
helicopter may be shut
down or left running

Type of loading, Hot versus Cold, will be determined by the crew based on many factors.

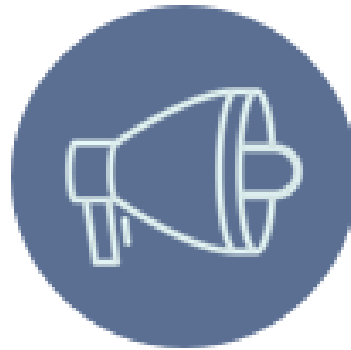
If you are unsure of what will occur, **ASK**.



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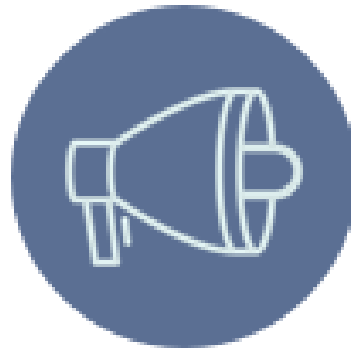
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SAFETY: ON SCENE

- ▶ Appoint a tail rotor guard
 - ▶ Responsible to watch the tail rotor
 - ▶ No other duties
 - ▶ Must stay 100 feet away
 - ▶ Stop persons from approaching (this includes vehicles)
 - ▶ Must be in contact with the LZ Commander at all times





SAFETY: AIRCRAFT DEPARTING

- ▶ Clear ground personnel away from the helicopter before engine start
- ▶ No one approaches the helicopter after the engines are started. (Let us come to you)
- ▶ Establish radio contact with the pilot and confirm LZ secure
- ▶ Notify the pilot immediately if an unsafe condition develops





OTHER CONSIDERATIONS



OTHER CONSIDERATIONS

- ▶ Request an aircraft early. Air Methods will perform ground and air standbys that will get us overhead if you need us at **NO COST TO YOU.**
- ▶ Review local guidelines for use of air transport
- ▶ When in doubt **CALL**, we can always turn around



WEATHER

- ▶ AMC has VFR and IFR bases
 - ▶ There are still rules and guidelines that must be followed
- ▶ Don't assume we can or can't fly
- ▶ Let the pilot make the weather decision
 - ▶ We want to help you, but we want to be safe



SAFETY FEATURES

- ▶ All AMC aircraft are equipped with:
 - ▶ State of the art GPS systems
 - ▶ Air conditioning
 - ▶ Night Vision Goggles
 - ▶ Terrain Avoidance Systems
 - ▶ XM Satellite Weather or onboard weather radar
 - ▶ Satellite Tracking System
 - ▶ Monitored by AirCom and Operational Control





HELICOPTER SHOPPING

- ▶ Practice of calling multiple providers until you find one that will accept the transport
- ▶ This may result in accidents
- ▶ If you call an additional service for a flight
 - ▶ You MUST tell the dispatcher if another agency has declined the flight
 - ▶ If two agencies have declined, transport patient by ground





PRE-DESIGNATED LZS

- ▶ Many agencies have pre-designated Landing Zones.
 - Your agency should occasionally survey these LZs to make sure nothing has changed
 - If you would like to pre-designate an area, please contact us



WHO CAN REQUEST AN AIRCRAFT?

- ▶ Air Methods aircraft may be requested by:
 - ▶ First responder, nurse, physician, law enforcement officials, or dispatch centers in your area
- ▶ Easiest method to request an aircraft:
 - ▶ Have your dispatch center contact AirCom
- ▶ Auto launching is always an option



CRASH RECOVERY



TWO TYPES OF EMERGENCY LANDINGS

▶ Forced Landings

- ▶ When further flight is impossible, but not as a result of catastrophic aircraft control problems

▶ Precautionary Landings

- ▶ Further flight is possible, but inadvisable (weather, fuel, minor mechanical issues)



ACCIDENTS

- ▶ Anytime there is substantial damage to the aircraft, significant injury, or loss of life
 - ▶ 75% of fatal aircraft accidents are the result of weather (Brotak, 2018)



WHAT TO EXPECT AT A CRASH SCENE

- ▶ Anything from minor injuries to fatal
- ▶ Aircraft could be anything from intact and running to completely destroyed
- ▶ **APPROACH WITH CAUTION**





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AT THE SCENE

- ▶ If pilot is alert, **DO NOT** approach without his permission!
- ▶ **DO NOT APPROACH IF THE ROTORS ARE STILL TURNING UNLESS OK'D BY THE PILOT**
- ▶ Make sure to keep yourself safe
- ▶ Extinguish any fires
 - ▶ Foam or water is fine



AT THE SCENE

- ▶ Secure the scene
- ▶ Keep bystanders away
- ▶ Have law enforcement available to protect the scene
- ▶ Extricate the flight crew, if needed
- ▶ May need to shut the aircraft down





WHAT TO DO IF YOU WITNESS A CRASH

- ▶ Call 911 if scene providers are not in contact with 911
- ▶ Call our dispatch, AirCom
- ▶ Please, do not release information to the media

- ▶ AirCom will notify:
 - ▶ County Law Enforcement Agencies
 - ▶ FAA
 - ▶ NTSB
 - ▶ Nearest Aircraft for Assistance
 - ▶ Nearest Ambulance for Response
 - ▶ Nearest Fire Department for Response
 - ▶ Receiving and Sending Hospital (if patient on board)



OBSERVATION EXPERIENCE

- ▶ As required by CAMTS, your instructor will show you:
 - ▶ Location of fuel tanks
 - ▶ Oxygen shut offs
 - ▶ Emergency egress procedures
 - ▶ Aircraft battery location
 - ▶ Emergency shut-down procedures



QUESTIONS?



REFERENCES

- ▶ A special thank to content creator, Bryon Denton, DNP, RN, CFRN, PHRN
- ▶ Brotak, E. (2018, June 25). Weather concerns for general aviation. *Flight Safety Foundation*.
<https://flightsafety.org/asw-article/weather-concerns-for-general-aviation/#:~:text=In%20a%20late%20October%202017,%5BNational%20Transportation%20Safety%20Board%5D>.



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