

The

AIRBORNE LAW ENFORCEMENT ASSOCIATION

Safety

Wire

July 2017

**IIMC** is the hot topic this month. A video was recently released from a helicopter crash that killed four people. The fact that the video shows a bride on her way to the wedding, being escorted by her brother, and filmed by her pregnant friend...makes the video especially heartbreaking. Within 24 hours my email and social media feeds were exploding with links, and discussions, about the video. Inadvertent, or unplanned, flight in instrument conditions has been the leading cause of fatalities for both fixed and rotary wing law enforcement aviation for many years, and ALEA has been heavily addressing this topic. With the renewed attention on the topic, it seemed like a good time to renew the discussion. If you have not seen it, here is a link to the video: <https://www.youtube.com/watch?v=TMhHjh8xhxE>

**TFOs** and other flight crewmembers: Unplanned flight into conditions where you cannot see the horizon is ALWAYS an emergency. Airplane, rotorcraft, instrument rating or not...there is no advantage to treating it as anything less than a life threatening event. Notice how the passengers in the video had no idea they were in an emergency situation until it was too late. One of the



leading factors in IIMC accidents is the pilot's failure to quit looking outside and transition to the instruments. As an instrument flight instructor, I spend a lot of time calling out deviations from the intended flight profile, "watch your bank, check your altitude, what heading are we supposed to be on?" Do you know how to work the avionics? If not, figure out how to change frequencies, load instrument approaches, etc. Don't be a helpless victim. Ensure the pilots gets on the instruments, call out deviations from level (or intended) flight, and know how to do the non-flying tasks, such as working with avionics, so the pilot can concentrate on maintaining control of the aircraft.

**Pilots:** Aviate, aviate, aviate...Once you enter IMC conditions, your primary responsibility is maintaining control of the aircraft, not trying to get back to VMC conditions as rapidly as possible. IIMC accidents result from loss of control. Rapid maneuvering to exit IMC as quickly as possible will pour fuel on the fire. Navigate only to avoid known obstacles or terrain. The temptation to continue to use VFR



flying techniques may be overwhelming, especially if you can occasionally see the ground. VFR flying requires a visible horizon. Flying without a horizon while concentrating on ground contact beneath the aircraft can quickly lead to loss of control.

Use the resources available to you. Have a trained flight crew and delegate non-flying tasks to them. Declare an emergency. Air Traffic Control can provide a significant amount of help, if we swallow our pride and ask for it.

**Instructors:** Treat planned IMC flying and unplanned IMC differently. They each have unique aspects that require unique training scenarios. The key to IIMC is the 'inadvertent' part...train for it. ALEA recommends some type of training every quarter. If you are trying to keep your people from being in a fatal accident, this is the place to dedicate significant time and resources.

If you have never read the ALEA IIMC training recommendations, here is an updated version of them. Please take the time to consider these recommendations.

- [IIMC Training Recommendations](#)
- [Online presentation on IIMC Survival](#)
- **IIMC Videos:**

<https://www.youtube.com/watch?v=o4QELOGXxPc>

[https://www.youtube.com/watch?v=51njl0n\\_dvl](https://www.youtube.com/watch?v=51njl0n_dvl)

<https://www.youtube.com/watch?v=EMxuO77mdQo>

*“A superior pilot uses his superior judgment  
to avoid situations  
which require the use of his superior skill.”*

## *Safety in Reno*

Once again, here is the schedule of safety events at the ALEA Expo in Reno:

### **Monday – Wednesday**

- Aviation SMS and Human Factors
- Aviation Safety Officer Course

### **Wednesday**

- IA Renewal Course (FREE!)

### **Thursday**

- Safety Officer’s Roundtable 1300 – 1430
- Safety Symposium – Loss of Control 1500 - 1700

### **Friday, July 28th - Safety Track:**



- Aviation Accident Trends\* 0800 – 0930  
*Mark Colborn, Dallas Police Department Helicopter Unit/USHST*
- Safety Metrics 1000 – 1130  
*SSA Troy Smith, Federal Bureau of Investigation Aviation Department*
- Operational Risk Management in Safety Management Systems 1330 – 1500  
*Glenn Daley, New York Police Dept. Aviation Unit (Ret.)*
- A Safety Culture in Your Unit: How Do You Get There? 1530 – 1700  
*Michael Sedam, California Highway Patrol Air Operations*

### **Friday, July 28th - Aeromedical Track:**

*ALEA Aeromedical Liaison Dudley Crosson (PhD)*

- Spatial Disorientation 0830 – 1000
- Stress and Aeronautical Decision Making 1030 – 1200
- CRM for Aircrews 1330 – 1500
- Human Factors and Accidents 1530 – 1700

### **Saturday, July 29th - Safety Track:**

*Bryan Smith, ALEA Safety Program Manager*

- Human Factors – Real Life Applications to Safety 0830 – 1000
- Implementing SMS for Law Enforcement 1030 - 1200

This is just a very small sampling of the many classes available during the ALEA Expo this July. For a full listing, go to: <http://alea.org/alea-expo-2017-reno-nv/alea-expo-2017-attend-learn/alea-expo-2017-attend-learn-education>.

*“Before you attempt to beat the odds,  
be sure you could survive the odds beating you.”*



## *ALEA Online Meetings*

The schedule for upcoming ALEA online meetings is as follows.

If you would like to join, send an email to: [safety@alea.org](mailto:safety@alea.org)



### **UAS:**

Wednesday, August 9, 2017  
16:00 PM - 17:30 PM EDT (2000  
UTC)

### **Maintenance:**

Wednesday, August 16, 2017  
1:00 PM - 2:00 PM EDT (1700  
UTC)

### **Safety Officers:**

Wednesday, August 23, 2017  
1:00 PM - 2:00 PM EDT (1700  
UTC)

## ***Reality Check...***

**Note:** The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in **red** where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

**Aircraft:**

**Cessna 185**

**Injuries:**  
**NTSB#:**

**1 Fatal**  
**ERA11GA207**

<https://app.nts.gov/pdfgenerator/ReportGeneratorFile.ashx?EventID=20110325X14309&AKey=1&RType=Final&IType=GA>

The pilot was employed as a state game warden, and, on the day of the accident, he was on patrol when he received a radio call from another game warden whose snowmobile was stuck on a nearby frozen lake. After landing on the lake and assisting another game warden, the pilot departed on the accident flight, presumably to return to his home base. The other game warden reported that, immediately after the airplane departed, the visibility was reduced to less than 1/2-mile due to snow. Postaccident analysis of position information recovered from a portable global positioning system (GPS) receiver showed that the airplane flew for about 10 minutes after takeoff at a relatively constant GPS altitude of about 1,500 feet mean sea level, or about 200 to 500 feet above ground level (agl). Shortly before the accident, the airplane turned left, away from its previously established course, toward a frozen lake along the route. During the final moments of the flight, the airplane entered a right descending turn from about 300 feet agl. During this time, the airplane was in an estimated 40-degree right bank, and its descent rate increased to in excess of 3,000 feet per minute. Examination of the accident site revealed ground scars and airplane damage consistent with the established descent profile continuing to impact. Examination of the wreckage revealed no evidence of any preimpact mechanical malfunctions or failures. Analysis of weather information and witness statements were consistent in depicting conditions likely to have produced restricted visibility and possible whiteout conditions in a snow squall over the area at the time of the accident. These restricted visibility conditions would have been conducive to the development of spatial disorientation, and the airplane's turning ground track and rapid descent were consistent with the pilot losing control of the airplane due to spatial disorientation.



## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: An inadvertent encounter with localized instrument meteorological conditions, which resulted in spatial disorientation and a loss of control.

**Aircraft:**  
**Injuries:**  
**NTSB#:**

**Bell 206L-1**  
**3 Fatal**  
**CEN10FA509**

The air ambulance positioning flight was en route to a landing zone to pick up a patient for transfer. One witness in the accident area described a helicopter circling overhead, and another witness reported that they heard the sound of crashing metal or the impact of the helicopter with the ground.

Radar and global positioning system data depicted the accident helicopter reversing course multiple times just prior to the accident. The flight path of the helicopter prior to the accident was consistent with spatial disorientation and subsequent loss of control due to an inadvertent encounter with instrument meteorological conditions.

The wreckage was located in forested terrain approximately 3.5 miles south of the intended destination. The wreckage distribution was consistent with an in-flight separation of the main rotor and tail boom. An examination of the helicopter airframe, engine, and related systems revealed no pre-impact anomalies. Both the main rotor assembly and tail boom separated in overload. The main rotor tie down strap found wrapped around the blade was a result of the accident sequence and did not contribute to the accident.



Weather information indicated a moist stable environment from the surface to approximately 2,500 feet, which supported low clouds and stratus below 2,500 feet. In addition, an AIRMET had been issued for instrument meteorological conditions (IMC) due to low ceilings and poor visibility. The Area Forecast advised of marginal visual meteorological conditions in the state of Arkansas. Witnesses in the area

described the weather as hazy or foggy, with overcast skies. One witness stated that it was very dark and no moon could be seen. The investigation was unable to determine what information the pilot had or method he used to obtain weather information prior to the flight.

The pilot held a commercial pilot certificate and an instrument rating. He had received instrument training, including inadvertent flight into IMC; however, the company did not operate in IMC. The pilot was trained and had recent experience in the use of night vision goggles. The investigation was unable to determine if the pilot was using the night vision goggles at the time of the accident. Courtesy

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of aircraft control, due to spatial disorientation, resulting in the in-flight separation of the main rotor and tail boom.

*There are no new ways to crash an aircraft...*

*...but there are new ways to keep them from crashing.*

Safe hunting,

**Bryan 'MuGu' Smith**

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