

## AASF Safety Spot – December 2023

by Rocky Capozzi

**Night VFR – Maybe!** I recently reviewed 30 NTSB accident reports and found 3 that had eerily similar beginnings and endings despite the pilots' very different qualifications. One pilot was a student; one was an experienced private pilot with 2500 hours; the third was a commercial rated instrument pilot. All three departed from non-towered airports on night cross country flights and encountered IMC followed by spatial disorientation. The NTSB final reports describe take off into "dark" night conditions with known clouds in the area and enroute. The student pilot and the commercial pilot crashed shortly after takeoff; the third pilot crashed about 20 minutes into his flight.

**Flight Visibility:** The PCG defines *flight visibility* as *the forward horizontal distance, from the cockpit of an aircraft in flight, at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night.* When there's no official weather observation at the point of departure, the visibility determination rests with the pilot.

**Night versus Dark Night:** I don't think there's an official definition of what constitutes a "dark" night. In my mind, a dark night is a night when there is no moon, few or no stars or ground lights, and no discernible horizon. Without a discernible horizon or other visual cues to keep you right side up, it is essentially instrument flight – even if you are in clear air. Your Night VFR logbook entry makes no distinction between "dark" night or bright night, but anyone who's ever flown on an inky black night knows it's very different than flying with a full moon glistening off the newly fallen snow.

**VFR Minimums:** [91.155\(a\)](#) tells us that day or night we need 3 statute miles visibility and must maintain cloud clearances of 500 feet below, 1000 feet above and 2000 feet horizontally to operate VFR in Class C, D, or E airspace below 10,000 feet MSL. Class G nighttime VFR visibility and cloud clearance requirements at all altitudes below 10,000 MSL are the same as daytime Class C, D, E airspace -- 3 statute miles visibility and 500 feet below, 1000 feet above and 2000 feet horizontal from clouds. [91.155\(b\)](#) provides an exception for nighttime Class G traffic pattern operations allowing operations clear of clouds within ½ mile of the runway and visibility between 1-3 statute miles.

Class G daytime visibility restrictions are relaxed to 1 statute mile from the surface to 10,000 MSL. A pilot must remain clear of clouds at or below 1200 ft AGL. Between 1200 AGL and 10,000 MSL cloud clearance requirements are 500 feet below, 1000 feet above and 2000 feet horizontally.

**Special VFR (FAR 91.157):** Special VFR only applies to *controlled airspace designated to the surface* for an airport. It is intended to get pilots into and out of controlled airports that aren't quite VFR. To legally exercise Special VFR at night the pilot must be instrument rated and current and the plane must be equipped for IFR operations. Finally, the controlling air traffic facility must approve the operation.

**Roll The Dice:** With no official observation at the departure point, with cloud layers and precipitation known to be in the vicinity, how does one determine whether VFR conditions exist on a dark night and for how long? Once off the ground, are you likely to see clouds in time to avoid them? In my experience on a dark night, the answer is no. Our three accident pilots somehow determined they had VFR conditions for takeoff and bet they could maintain VFR visibility and cloud clearance criteria all the way to their destination. They lost their bets. We are all subject to get there-itis. We need to fight it off, exercise good aeronautical decision making, and file IFR if properly equipped, qualified and current. If

filing and flying IFR is not an option, then waiting for improved weather, daylight, or both seems like the best bet for a successful outcome.

Until next time, keep up your cross check,

Rocky

**No Fall / December Seminar:** AASF is not sponsoring a Fall Safety Seminar. Our next planned seminar will be held in April 2024.

**Member Survey:** Please keep your eye out for a member survey coming soon. The AASF board needs to know what your opinions and desires are as we move forward.

Basic VFR Weather Minimums			
Airspace		Flight Visibility	Distance from Clouds
Class A		Not applicable	Not applicable
Class B		3 statute miles	Clear of clouds
Class C		3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class D		3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class E	At or above 10,000 feet MSL	5 statute miles	1,000 feet above 1,000 feet below 1 statute mile horizontal
	Less than 10,000 feet MSL	3 statute miles	1,000 feet above 500 feet below 2,000 feet horizontal
Class G	1,200 feet or less above the surface (regardless of MSL altitude)	Day, except as provided in section 91.155(b)	1 statute mile
		Night, except as provided in section 91.155(b)	3 statute miles
	More than 1,200 feet above the surface but less than 10,000 feet MSL	Day	1 statute mile
		Night	3 statute miles
	More than 1,200 feet above the surface and at or above 10,000 feet MSL		5 statute miles
			1,000 feet above 1,000 feet below 1 statute mile horizontal