

**Factual Report – Addendum 2**

**METEOROLOGY**

CEN19FA072

## **A. ACCIDENT**

Location: Zaleski, Ohio  
Date: January 29, 2019  
Time: 0651 eastern standard time  
1151 Coordinated Universal Time (UTC)  
Aircraft: Bell 407; Registration: N191SF

## **B. METEOROLOGIST**

Paul Suffern  
Senior Meteorologist  
Operational Factors Division (AS-30)  
National Transportation Safety Board

## **C. WEATHER INFORMATION**

Further investigation information was received and is discussed below.

The accident aircraft was equipped with a Garmin 650<sup>1</sup> which had Flight Information Services–Broadcast (FIS-B) installed. The evening shift pilot stated that both he and the accident pilot configured the Garmin 650 the same way and would not change the Garmin 650 settings during flight. According to the evening shift pilot, the moving map display would be configured to have overlay FIS-B data including precipitation. The Garmin 650 screens would also have groundspeed, estimated time enroute, waypoint name, and distance to the named waypoint displayed.<sup>2</sup> FIS-B data that would have been available for the accident flight was retrieved and is contained in attachment 2. The FIS-B NEXRAD weather radar information is based off of WSR-88D data (see weather factual located in the docket of this accident for more information on WSR-88D). For any of the graphical products the user (in this case the accident pilot) would have to manually press buttons (to turn on/off display) to highlight other text and graphical information (e.g. METARs, PIREPs, AIRMETs, etc...). For more information about what weather information could have been displayed on FIS-B please see attachments 2 and 3.

Also, the NTSB submitted request 19-226 for information from the FAA regarding snow-related icing with “wet snow” and/or “dry snow. The FAA’s response to NTSB Request 19-226 is provided as attachment 4 to this addendum. In their response, the FAA stated in part, “...The FAA does certify aircraft to fly in snow. The only certification requirements to fly in snow are related to the engine and engine inlet, and we assume a clean aircraft for takeoff. Regulations restrict flight into known or forecast icing conditions. Because of the limitations of icing forecasts, or the difficulty in forecasting whether any snow encountered will be wet or dry, it is admittedly difficult for pilots to be certain whether the conditions in which they are flying actually will result in an icing encounter, and it is even more difficult to determine the severity of the possible encounter.

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<sup>1</sup> For more information on the electronic equipment located on the accident aircraft please see the docket information from this accident.

<sup>2</sup> For more information please see attachment 1.

Pilots can be caught inadvertently in icing conditions that exceed these legal limits. The FAA does, however, provide ample guidance to pilots who are planning flights into potential icing conditions or who encounter icing conditions (such as wet snow) while in flight.” For more information on NTSB request 19-226 and the FAA’s response please see attachment 4 to this addendum.

#### **D. LIST OF ATTACHMENTS**

Attachment 1 – Interview summary

Attachment 2 – FIS-B weather information surrounding the accident flight

Attachment 3 – FIS-B weather information

Attachment 4 – FAA response to NTSB Request 19-226

Submitted by:

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Paul Suffern  
Senior Meteorologist