Aviation Investigation Final Report

Location:	Andrews, Texas	**Accident Number:**	CEN15LA137
Date & Time:	February 5, 2015, 00:48 Local	**Registration:**	N29AC
Aircraft:	Beech A36	**Aircraft Damage:**	Substantial
Defining Event:	Loss of control in flight	**Injuries:**	2 Serious, 2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The commercial pilot was conducting a personal cross-country flight. Before departure, the pilot received a weather briefing, which called for icing conditions below 12,000 ft for an area that encompassed the destination airport. The pilot reported that he contacted the air route traffic controller to request an area navigation global positioning system (RNAV GPS) approach. Before initiating the approach, the pilot listened to the destination airport's current automated weather observation. After the controller cleared the approach, the airplane descended through a 200- to 300-ft-thick cloud layer and then broke out of the clouds about 700 to 800 ft above ground level with the runway in sight. The airplane was descending a little more quickly than desired, so the pilot added full power, and, even though the engine sounded fine, the descent rate continued. The airplane contacted the ground about 3,000 ft short of the runway, less than 1 minute from the time it descended out of the clouds. An on-scene examination of the airplane revealed 1/4- to 1/2-inch-thick ice on the leading edge of the wings, vertical stabilizer, horizontal stabilizer, windscreen, and several antennas on the fuselage.

The air traffic controller did not verify, as required, that the pilot had the current local weather information so verification by the controller likely would not have affected the pilot's decision to land at the destination airport. Further, although the controller did not solicit nor distribute a pilot report to the accident pilot or the pilot in the airplane that landed just before the accident airplane, the pilot had received information in his weather briefing indicating that icing was possible in the area.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be:

The pilot's failure to note that icing conditions existed in the airport area despite having received that information in a preflight briefing, which resulted in his flight into an area of icing and the subsequent loss of airplane control due to ice accumulation on the airplane.

Findings

Environmental issues	Conducive to structural icing - Awareness of condition
Personnel issues	Aircraft control - Pilot
Personnel issues	Attention - Pilot
Aircraft	(general) - Not attained/maintained
Environmental issues	Conducive to structural icing - Effect on operation

Factual Information

History of Flight

Approach-IFR final approach	Loss of control in flight (Defining event)
Approach-IFR final approach	Collision with terr/obj (non-CFIT)

On February 5, 2015, at 0048 central standard time, a Beech A36 airplane, N29AC, collided with the terrain while landing at the Andrews County Airport (E11), Andrews Texas. The commercial pilot and one passenger received serious injuries. The remaining two passengers received minor injuries. The airplane was substantially damaged. The airplane was registered to and operated by a private individual under the provisions of 14 Code of Federal Regulations Part 91, as a personal flight. Instrument meteorological conditions prevailed at the time of the accident, which was operating on an instrument flight rules (IFR) flight plan. The flight originated from the Mid Valley Airpark (E98), Los Lunas, New Mexico, at 2341.

The pilot reported they originally departed California and made an en route stop at E98. While on the ground at E98, he obtained a direct user access terminal service (DUATS) weather briefing and departed shortly thereafter. The pilot reported that while en route, around Roswell, New Mexico, a thin layer of clouds began to appear below his altitude.

At 0016, the pilot communicated with the Fort Worth Air Route Traffic Control Center (ZFW) that he was going to request the area navigation global positioning system (RNAV GPS) runway 16 approach at E11. The pilot then requested and received the 2353 weather observation for his alternate airport, Midland International Airport (MAF). The pilot did not request, nor was the E11 weather observation given to the pilot. The pilot was informed that there was another airplane on the approach in front of him, and he was cleared to descend and maintain 7,000 ft at the pilot's discretion. About one minute later, the controller advised the pilot that the other airplane had canceled their IFR flight plan and that he was now cleared to descend and maintain 6,000 ft. The pilot was then cleared for the RNAV GPS runway 16 approach. At 0039, the controller confirmed with the pilot that he was at the HWSER fix and advised the pilot that radar services were terminated, he could change to the advisory frequency, and to cancel his IFR flight plan on the ground.

The pilot reported that when they were close to the airport, with the landing gear and flaps extended, they descended through a 200 to 300 ft thick cloud layer breaking out of the clouds at 700 to 800 ft above ground level with the runway in sight. He stated the airplane was descending a little quicker than desired so he added full power and even though the engine sounded fine, the descent rate continued. The pilot stated that the airplane contacted the ground in less than a minute from the time it descended out of the clouds.

The airplane contacted the terrain about 3,000 ft short of the approach end of runway 16 and traveled about 1,000 ft before coming to rest. An initial postaccident examination of the airplane revealed ¼ to ½

inch of ice was present on the leading edge of the wings, vertical stabilizer, horizontal stabilizer, the windscreen, and several antennas on the fuselage.

The pilot reported that there was no indication of icing conditions from the DUATS weather briefing, the E11 automated weather observing system (AWOS) which he listened to prior to initiating the approach, or from air traffic control. The pilot stated he did not see any visible ice on the side window or on the inboard portion of the wing when he checked it during the descent through the clouds.

Weather Information

A copy of the DUATS weather briefing that the pilot received contained AIRMET ZULU which was valid at the time of the accident and encompassed E11. The AIRMET called for moderate ice below 12,000 ft.

At 2355, the E11 Aviation Routine Weather Report (METAR) observation reported wind from 020 degrees at 16 knots gusting to 19 knots, visibility 4 statute miles with mist, ceiling 700 ft overcast, temperature minus 1 degree Celsius, dewpoint minus 1 degree Celsius, altimeter 30.37 inches of mercury.

At 0055, the E11 METAR observation reported wind from 010 degrees at 11 knots, visibility 5 statute miles with mist, ceiling 700 ft overcast, temperature minus 1 degree Celsius, dewpoint minus 2 degrees Celsius, altimeter 30.39 inches of mercury.

At 2353, the MAF METAR observation, located 29 miles southeast of the accident site, reported wind from 020 degrees at 15 knots, visibility 9 statute miles, ceiling 800 ft overcast, temperature 0 degrees Celsius, dewpoint minus 2 degrees Celsius, altimeter 30.36 inches of mercury. Remarks included peak wind from 020 degrees at 27 knots at 2317 and a ceiling of 600 ft variable 1,100 ft.

Air Traffic Control Services

The MAF approach control facility closed at 0000 at which time ZFW assumed their approach control responsibilities, which included E11. The responsibilities include the requirement to provide approach information to aircraft destined to airports for which they provide approach control services.

FAA Order 7110.65, Air Traffic Control, paragraph 4-7-10, Approach Information, states in part:

a. en route and terminal approach control sectors must provide current approach information to aircraft destined to airports for which they provide approach control services. This information must be provided on initial contact or as soon as possible thereafter. Approach information contained in the ATIS broadcast may be omitted if the pilot states the appropriate ATIS code. For *pilots destined to an airport without ATIS, items 3−5 below may be omitted after the pilot advises receipt of the automated weather; otherwise, issue approach information by including the following:*

1. *Approach clearance or type approach to be expected if two or more approaches are published and the clearance limit does not indicate which will be used.*

2. *Runway if different from that to which the instrument approach is made.*

3. *Surface wind.*

4. *Ceiling and visibility if the reported ceiling at the airport of intended landing is below 1,000 feet or below the highest circling minimum, whichever is greater, or the visibility is less than 3 miles.*

5. *Altimeter setting for the airport of intended landing.*

b. *Upon pilot request, controllers must inform pilots of the frequency where automated weather data may be obtained and, if appropriate, that airport weather is not available.*

Although the pilot reported that he did listen to the E11 AWOS prior to beginning the approach, the ZFW controller who was providing approach control services did not ensure that the pilot had the current weather information for E11.

FAA Order 7110.65, Air Traffic Control, paragraph 2-6-2, PIREP INFORMATION states in part:

Significant PIREP information includes reports of strong frontal activity, squall lines, thunderstorms, light to severe icing, wind shear and turbulence (including clear air turbulence) of moderate or greater intensity, volcanic eruptions and volcanic ash clouds, detection of sulfur gases (SO2 or H2S) in the cabin, and other conditions pertinent to flight safety.

a. *Solicit PIREPs when requested or when one of the following conditions exists or is forecast for your area of jurisdiction:*

1. *Ceilings at or below 5,000 feet. These PIREPs must include cloud base/top reports when feasible.*

TERMINAL. Ensure that at least one descent/climb- out PIREP, including cloud base/s, top/s, and other related phenomena, is obtained each hour.

EN ROUTE. When providing approach control services, the requirements stated in TERMINAL above apply.

2. *Visibility (surface or aloft) at or less than 5 miles.*

3. *Thunderstorms and related phenomena.*

4. *Turbulence of moderate degree or greater.*

5. *Icing of light degree or greater.*

6. *Wind shear.*

7. *Volcanic ash clouds.*

NOTE−

Pilots may forward PIREPs regarding volcanic activity using the format

described in the Volcanic Activity Reporting Form (VAR) as depicted in the

AIM, Appendix 2.

8. *Detection of sulfur gases (SO2 or H2S), associated with volcanic activity, in the cabin.*

NOTE−

The smell of sulfur gases in the cockpit may indicate volcanic activity that

has not yet been detected or reported and/or possible entry into an ash- bearing cloud. SO2 is identifiable as the sharp, acrid odor of a freshly struck match. H2 S has the odor of rotten eggs.

9. *TERMINAL. Braking Action Advisories are in effect.*

b. *Record with the PIREPs:*

1. *Time.*

2. *Aircraft position.*

3. *Type aircraft.*

4. *Altitude.*

5. *When the PIREP involves icing include:*

(a) *Icing type and intensity.*

(b) *Air temperature in w hich icing is occurring.*

c. Obtain PIREPs directly from the pilot, or if the PIREP has been requested by another facility, you may instruct the pilot to deliver it directly to that facility.

Weather information which included the icing and freezing level information was provided and available to the ZFW controllers via the supervisors console at each sector/area in the center. The weather conditions at E11 met the criteria for the controller to solicit a PIREP from arriving and departing aircraft. The controller did not solicite PIREP information from either the airplane that landed just prior to the accident airplane or from the accident pilot.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	42
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	Lap only
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine; Helicopter; Instrument airplane	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	November 24, 2014
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	September 14, 2014
Flight Time:	3200 hours (Total, all aircraft), 51 hours (Total, this make and model), 3000 hours (Pilot In Command, all aircraft), 31 hours (Last 90 days, all aircraft), 25 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Beech	**Registration:**	N29AC
Model/Series:	A36	**Aircraft Category:**	Airplane
Year of Manufacture:	1972	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	E-332
Landing Gear Type:	Retractable - Tricycle	**Seats:**	5
Date/Type of Last Inspection:	February 2, 2014 Annual	**Certified Max Gross Wt.:**	3651 lbs
Time Since Last Inspection:	150 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	4833.8 Hrs at time of accident	**Engine Manufacturer:**	Continental
ELT:	Installed	**Engine Model/Series:**	IO-520
Registered Owner:	On file	**Rated Power:**	285 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Night
Observation Facility, Elevation:	E11,3174 ft msl	**Distance from Accident Site:**	0 Nautical Miles
Observation Time:	00:55 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:		**Visibility**	5 miles
Lowest Ceiling:	Overcast / 700 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	11 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	10°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.38 inches Hg	**Temperature/Dew Point:**	-1°C / -2°C
Precipitation and Obscuration:	N/A - None - Mist		
Departure Point:	Los Lunas, NM (E98)	**Type of Flight Plan Filed:**	IFR
Destination:	Andrews, TX (E11)	**Type of Clearance:**	IFR
Departure Time:	23:41 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Andrews County Airport E11	**Runway Surface Type:**	Asphalt
Airport Elevation:	3174 ft msl	**Runway Surface Condition:**	Unknown
Runway Used:	16	**IFR Approach:**	Global positioning system
Runway Length/Width:	5816 ft / 75 ft	**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious, 2 Minor	**Aircraft Fire:**	Unknown
Ground Injuries:	N/A	**Aircraft Explosion:**	Unknown
Total Injuries:	2 Serious, 2 Minor	**Latitude, Longitude:**	32.347221,-102.536666(est)

Administrative Information

Investigator In Charge (IIC):	Sullivan, Pamela
Additional Participating Persons:	Craig Patterson; FAA; Lubbock, TX Dan Bartlett; NTSB; DC Mike Richards; NTSB; DC
Original Publish Date:	June 1, 2016
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=90694