Aviation Investigation Final Report

Location:	Ft Pierce, Florida	**Accident Number:**	ATL05FAMS1
Date & Time:	June 20, 2005, 11:10 Local	**Registration:**	N6886Y
Aircraft:	Piper PA-23	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	3 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The flight departed Treasure Cay International Airport, Abaco Island, Bahamas en route to Ft. Pierce, Florida. The pilot contacted the Miami Air Route Traffic Control Center (ZMA) after departure from the Treasure Cay airport, and requested IFR clearance to Fort Pierce, Florida. The ZMA controller radar identified the airplane and issued clearance to Fort Pierce via direct Freeport, direct Fort Pierce, at 10,000 feet. The airplane traveled west along Grand Bahamas Island until reaching Freeport, and then turned northwest toward Fort Pierce. During interviews with air traffic controllers it was revealed that during the period that the airplane was on frequency broadcast SIGMET information relevant to the airplane's route of flight was transmitted. However both controllers stated that they observed precipitation return in the vicinity of the airplane's route, but they never advised the pilot of those observations. Radar data shows the airplane passing through an area of intense weather radar echoes containing thunderstorms with intense rain, up and downdrafts, at least moderate turbulence, horizontal wind gusts, and IMC conditions. The FAA order 7110.65, "Air Traffic Control," paragraph 2-6-4, "Weather and Chaf Services, " States: 2. Issue the level of echo intensity when that information is available.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's continued flight into known thunderstorm activity that resulted in the loss of control and the subsequent collision with water. A factor was the controller's failure to provide the pilot with convective intensity.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER
Phase of Operation: CRUISE - NORMAL

Findings
1. (C) WEATHER CONDITION - THUNDERSTORM
2. (C) FLIGHT INTO KNOWN ADVERSE WEATHER - CONTINUED - PILOT IN COMMAND
3. (F) PROCEDURE INADEQUATE - ATC PERSONNEL(ARTCC)

Occurrence #2: LOSS OF CONTROL - IN FLIGHT
Phase of Operation: CRUISE

Occurrence #3: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: DESCENT - UNCONTROLLED

Findings
4. TERRAIN CONDITION - WATER

Factual Information

HISTORY OF FLIGHT

On June 20, 2005 at 1110 eastern daylight time, a Piper PA-23, N6886Y, registered to and operated by the commercial pilot, never arrived at its intended destination after departing from the Treasure Cay International Airport, Abaco Island, Bahamas enroute to Ft. Pierce, Florida. The personal flight was operated under the provisions of Title 14 CFR Part 91, and instrument flight rules. Instrument meteorological conditions prevailed and an IFR Flight Plan was filed. The pilot and two passengers are presumed dead and the airplane is presumed to have sustained substantial damage. The flight originated from the Treasure Cay International Airport, Abaco Island, Bahamas VFR on June 20, 2005, at an undetermined time.

At 1016, the pilot contacted the Miami Air Route Traffic Control Center (ZMA) after departure from the Treasure Cay airport, and requested IFR clearance to Fort Pierce, Florida. The ZMA controller radar identified the airplane and issued clearance to Fort Pierce via direct Freeport, direct Fort Pierce, at 10,000 feet. The airplane traveled west along Grand Bahamas Island until reaching Freeport, and then turned northwest toward Fort Pierce.

At 1032 the ZMA controller advises the pilot to contact ZMA center frequency 132.95, which was acknowledged by the pilot. The pilot then proceeds to check in on the same frequency (134.2), but does not hear the ZMA controller responding. This happens about four times over the next four minutes.

At 1036, the pilot again calls ZMA on frequency 134.2, but now hears ZMA answering. The ZMA controller advises the pilot what has been occurring with the frequency change problem and again advises the pilot to contact ZMA on frequency 132.95, and the pilot acknowledges.

At 1052, The ZMA controller advises the pilot to contact ZMA on ZMA frequency 132.15, and the pilot acknowledges.

At 1053, the pilot contacts ZMA on frequency 132.15, and advises level at 10,000 feet. The ZMA controller acknowledges and issued the pilot the Palm Beach altimeter setting of 30.01 and the pilot acknowledges.

At 1105, the pilot calls the ZMA controller and advises that they are in severe turbulence and requests help out of the weather. The controller advises the pilot that the aircraft was in an area of heavy precipitation and should be exiting at any moment. There was no response from the pilot.

At 1106, the ZMA controller advises the pilot that it appears that the aircraft is coming into a

clear area and when able, descend and maintain 9,000 feet. An unknown aircraft advises that the clearance is blocked and the ZMA controller reissues the clearance. There is no acknowledgement from the pilot. The ZMA controller attempts to contact the pilot several times with no response.

According to preliminary radar data the airplane was last observed on radar at Longitude 27-degrees and 03 minutes North and 079-degrees 35 minutes west. A search and rescue operation conducted by the United States Coast Guard found no evidence of the airplane during their search. Search and rescue operations were suspended by the Coast Guard on June 21, 2005.

PERSONNEL INFORMATION

A review of information on file with the Federal Aviation Administration Airman's Certification Division, Oklahoma City, Oklahoma, revealed the pilot was issued a commercial pilot certificate with rating for airplane single engine land and sea, multi-engine land and instrument airplane. A review of records on file with the FAA Aero Medical Records revealed the pilot held a second class medical certificate issued on February 17, 2005, with no restrictions. The pilot reported on his application for the medical certificate that he had accumulated 2,800 total flight hours.

AIRCRAFT INFORMATION

The Piper PA-23-250, S/N 27-4236, was a six seat, twin engine, low wing, retractable tricycle landing gear airplane. A review of maintenance records revealed that the annual inspection was completed on January 17,2005, at an airframe total time of 6,766.2 hours.

METEOROLOGICAL INFORMATION

At the time and in the area of the accident a National Weather Service Convective SIGMET (Convective SIGMET 29E) for a developing area of thunderstorms with tops to FL450 was in effect. The area of developing thunderstorms were moving from 230-degrees at 25 knots.

WRECKAGE AND IMPACT INFORMATION

The airplane was not recovered.

MEDICAL AND PATHOLOGICAL INFORMATION

The pilot and passengers were not recovered.

ADDITIONAL INFORMATION

The airplane was a visual flight rules departure that left Abaco Island en route to Fort Pierce, Florida, and requested an IFR clearance from Miami Air Route Traffic Control Center (ARTCC).

During interview of the air traffic controllers at the Miami ARTCC it was revealed that the first controller to handle the airplane issued the clearance as requested, and during the period that the airplane was on frequency broadcast SIGMET information relevant to the airplane's route of flight. However, a review of the communications transcript showed that the pilot was having communication difficulties. The airplane was eventually transferred to another controller, and continued with that controller until the accident occurred. Both controllers stated that they observed precipitation return in the vicinity of the airplane's route. However, the pilot was never advised of these observations.

FAA order 7110.65, "Air Traffic Control," paragraph 2-6-4, "Weather and Chaff Services," states:
2-6-4. WEATHER AND CHAFF SERVICES

A. Issue pertinent information on observed/reported weather or chaff areas. Provide radar navigational guidance and/or approve deviations around weather or chaff areas when requested by the pilot. Do not use the word "turbulence" in describing radar-derived weather.

1.Issue weather and chaff information by defining the area of coverage in terms of azimuth (by referring to the 12-hour clock) and distance from the aircraft or by indicating the general width of the area and the area of coverage in terms of fixes or distance and direction from fixes.
2.Issue the level of echo intensity when that information is available.
3.When equipment limitations exist, controllers shall, at a minimum, ensure that the highest available level of echo intensity within their area of jurisdiction is displayed.
4.When a deviation cannot be approved as requested and the situation permits, suggest an alternative course of action.

B. In areas of significant weather, plan ahead and be prepared to suggest, upon pilot request, the use of alternative routes/altitudes. {New-2004-12 1-1-3 Note Revised February 19, 2004} NOTE 3 states: Weather significant to the safety of aircraft includes such conditions as tornadoes, lines of thunderstorms, embedded thunderstorms, large hail, wind shear, microburst, moderate to extreme turbulence (including CAT), and light to severe icing.

C. Inform any tower for which you provide approach control services if you observe any weather echoes on radar, which might affect their operations. The Miami Center is equipped with digital weather display capability that is designed to show levels 2 through 6 on the NWS VIP scale, and the Miami controller had both extent and intensity information available to him.

Pilot Information

Certificate:	Commercial	**Age:**	60,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 Without waivers/limitations	**Last FAA Medical Exam:**	February 1, 2005
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	
Flight Time:	2800 hours (Total, all aircraft), 125 hours (Last 90 days, all aircraft), 2 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N6886Y
Model/Series:	PA-23	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	27-4236
Landing Gear Type:	Retractable - Tricycle	**Seats:**	6
Date/Type of Last Inspection:	January 1, 2005 Annual	**Certified Max Gross Wt.:**	5200 lbs
Time Since Last Inspection:		**Engines:**	2 Reciprocating
Airframe Total Time:	6766.2 Hrs as of last inspection	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	TIO-540 SER
Registered Owner:	On file	**Rated Power:**	250 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	FPR,24 ft msl	**Distance from Accident Site:**	60 Nautical Miles
Observation Time:	10:53 Local	**Direction from Accident Site:**	90°
Lowest Cloud Condition:	Few / 7000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	4 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	320°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.01 inches Hg	**Temperature/Dew Point:**	26°C / 23°C
Precipitation and Obscuration:	Heavy - Thunderstorm - Mist		
Departure Point:	Abaco Island (MYAT)	**Type of Flight Plan Filed:**	IFR
Destination:	Ft. Pierce, FL (FPR)	**Type of Clearance:**	IFR
Departure Time:		**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	3 Fatal	**Latitude, Longitude:**	27.049999,-79.583335

Administrative Information

Investigator In Charge (IIC):	Wilson, Ralph
Additional Participating Persons:	Scott Strickland; Orlando FSDO; Orlando, FL
Original Publish Date:	January 31, 2006
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=61774