



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Sault Ste Marie, MI	<b>Accident Number:</b>	CHI06LA062
<b>Date &amp; Time:</b>	01/05/2006, 0200 EST	<b>Registration:</b>	N700NC
<b>Aircraft:</b>	Beech A100	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	3 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Positioning - Air Medical (Medical Emergency)		

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## Analysis

The airplane, operated as an emergency medical flight, received substantial damage when it veered off the edge of runway 32 (5,235 feet long by 100 foot wide asphalt, slush and snow covered) and impacted a snow bank during landing roll at a non 14 CFR Part 139 airport. Night instrument meteorological conditions prevailed at the time of the accident. The pilot stated that during a nonprecision approach while two miles from the runway, he observed it to be completely covered in snow and slush. He continued the approach and upon touchdown the airplane decelerated in deep slush and veered to the left after a rollout of 1,200 feet. The pilot reported that prior to accepting the emergency medical flight, he obtained a weather briefing from a flight service station during which time no notices to airman (NOTAMs) existed that pertained to the destination airport. The pilot reported that he knew the airport was getting rain and was expecting the runway to be clear. He was surprised that the runway was covered with heavy slush. The airport manager stated that the runway was covered with wet, slushy snow as there had been periods of wet snow and rain that occurred late the previous day and evening of the accident. The airport weather observation recorded the presence of light snow in a period of approximately 24 hours before the accident. The pilot "wondered" why no NOTAM was issued relating to the runway condition. The Airport Facility Directory and the FAA's web site provides a list of 14 CFR Part 139 airports which are inherently required to issue NOTAMs. However, Advisory Circular 150/5200-28C states, the management of a public use airport is expected to make known, as soon as practical, any condition on or in the vicinity of an airport, existing or anticipated, that will prevent, restrict, or present a hazard during the arrival or departure of aircraft. Airport management is responsible for observing and reporting the condition of airport movement areas. Public notification is usually accomplished through the NOTAM system. The Aeronautical Information Manual, states that NOTAM information is information that could affect a pilot's decision to make a flight. It includes information such as airport or primary runway closures, changes in the status of navigational aids, ILS's, radar service availability, and other information essential to planned en route, terminal, or landing operations.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The inadequate in-flight decision to continue the approach to land, directional control not maintained, and the contaminated runway. Contributing factors were flight to destination alternate not performed, a notice to airman not issued by airport personnel relating to snow/slush contamination of the runway, and the snow bank that the airplane impacted during the landing.

### Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER

Phase of Operation: LANDING

#### Findings

1. (C) RUNWAY/LANDING AREA CONDITION - SNOW COVERED
2. (F) NOTAMS - NOT ISSUED - AIRPORT PERSONNEL
3. (C) RUNWAY/LANDING AREA CONDITION - SLUSH COVERED
4. (C) IN-FLIGHT PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
5. (F) FLIGHT TO DESTINATION ALTERNATE - NOT PERFORMED - PILOT IN COMMAND
6. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING

#### Findings

7. (F) TERRAIN CONDITION - SNOWBANK

## Factual Information

On January 5, 2006, at 0200 eastern standard time, a Beech A100, N700NC, operated by North Country Aviation, Inc., as an emergency medical service flight, veered off runway 32 (5,235 feet by 100 feet, asphalt) during landing roll at Sault Ste Marie Municipal/Sanderson Field Airport (ANJ), Sault Ste Marie, Michigan. The airplane received substantial damage when it impacted snow covered terrain. Night instrument meteorological conditions prevailed at the time of the accident. The Title 14 CFR Part 91 air medical positioning flight was operating on an instrument rules flight plan. The airline transport pilot and two passengers were not injured. The flight departed Cherry Capital Airport (TVC), Traverse City, Michigan at 0110 en route to ANJ.

The pilot stated that about 0030 he was contacted by North Flight Communications Center regarding a patient air transport request from War Memorial Hospital in Sault Ste Marie, Michigan. The pilot was requested to fly from TVC to ANJ and transport the patient back to TVC. The pilot called Lansing Flight Service Station (FSS) to obtain a weather briefing and any applicable Notices to Airmen (NOTAMs) that may affect the flight route. The pilot reported he was especially concerned about runway conditions at ANJ, but was told by FSS that there were no NOTAMs issued pertaining to runway conditions at ANJ.

The pilot stated that he executed the VOR 32 approach and broke out of a cloud layer about 900 feet above ground level (AGL). Approximately 2 miles from the airport, he could see the runway lights and that the runway was "completely" snow and slush covered such that the close in runway lights became difficult to see. The airplane crossed the runway threshold at 100 knots indicated airspeed and landed approximately 700 feet down the runway. The pilot stated he immediately felt the airplane decelerate in deep slush and veer to the left but there "was nothing he could do" before the airplane's left main landing gear wheel "caught" a snow bank. The pilot reported that he knew ANJ was "getting" rain and was "expecting" the runway to be clear and was "surprised" that the runway was covered with "heavy" slush.

Following the accident, the pilot notified Lansing FSS of the accident and once again asked if there were any NOTAMs issued for runway conditions at ANJ. The pilot stated he was advised that there were no NOTAMs in reference to the runway conditions at ANJ. The pilot reported that he wondered why the airport had not issued a NOTAM when it was evident that the runway was contaminated with slush.

During a telephone interview with the Investigator-In-Charge, the pilot stated that he did not know if ANJ was certified under FAR Part 139 and that he didn't know what that meant. When the pilot was asked how he could determine if an airport is certified under Part 139, he responded that he "did not know but would contact the FAA's Flight Standards District Office."

Airports that are certified under Federal Aviation Regulation (FAR) Part 139 are indicated by an Aircraft Rescue and Fire Fighting (ARFF) index. The Airport/Facility Directory (A/FD) does not list an ARFF index for ANJ. The absence of an ARFF index for an airport listed in the A/FD would indicate that the airport was not certified under FAR Part 139 and therefore would not be required to issue NOTAMs. Also, a list of airports in the United States that are Part 139 certified can be found on the Federal Aviation Administration's internet website through the link, Airport Certification Status Table, which can be found at the following address:  
[http://www.faa.gov/airports\\_airtraffic/airports/airport\\_safety/part139\\_cert/](http://www.faa.gov/airports_airtraffic/airports/airport_safety/part139_cert/)

The airport manager at ANJ stated that the runway was covered with wet, slushy snow as there "had been periods of wet snow [and] rain" that occurred late the previous day and evening of the accident. The manager reported that the airplane touched down left of the centerline, but "clearly" on the runway. The airport manager stated the tracks of the airplane's gear did not indicate any abrupt change in direction. The manager reported the tracks "go fairly straight down the runway for several hundred feet, but with a slight drift toward the left." He reported that the airplane traveled along the runway until the left main gear went into a snow bank at which point the airplane "just veered left" with the nose and main gear leaving the runway surface. The manager stated the airplane came to rest with the tail "overhanging" the runway edge and positioned "almost perpendicular" to the runway. The manager reported he measured the distance the airplane traveled as 1,200 feet from the point of touchdown to the where the airplane veered into a snow bank and came to a full stop.

The ANJ Automated Weather Observing System recorded the following observations on the day of the accident: At 0155, wind 340 degrees at 7 knots; surface visibility 2.5 statute miles; light snow and mist present; sky conditions broken at 900 AGL, overcast at 1,300 AGL; temperature 0 degrees Celsius (C); dew point 0 degrees C; altimeter 29.70 inches of mercury (Hg). The weather records for ANJ show that the light snow and a total precipitation of 0.42 inches was present over a 24-hour period prior to the accident.

Advisory Circular 150/5200-30A explains that snow impedes the passage of wheels by absorbing energy in compaction and displacement. The resulting drag increases as the water content of the snow increases. A slush covered pavement will reduce friction and can also cause hydroplaning. It is, therefore, necessary to remove snow from active runways as soon as possible after snowfall begins.

Advisory Circular 150/5200-28C states that the management of a public use airport is expected to make known, as soon as practical, any condition on or in the vicinity of an airport, existing or anticipated, that will prevent, restrict, or present a hazard during the arrival or departure of aircraft. Airport management is responsible for observing and reporting the condition of airport movement areas. Public notification is usually accomplished through the NOTAM system.

The Aeronautical Information Manual, Section 5-1-3 Notice to Airmen (NOTAM) System, states that NOTAM information is information that could affect a pilot's decision to make a flight. It includes information such as airport or primary runway closures, changes in the status of navigational aids, ILS's, radar service availability, and other information essential to planned en route, terminal, or landing operations.

## Pilot Information

<b>Certificate:</b>	Airline Transport	<b>Age:</b>	55, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane; Helicopter	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 With Waivers/Limitations	<b>Last Medical Exam:</b>	07/01/2005
<b>Occupational Pilot:</b>		<b>Last Flight Review or Equivalent:</b>	10/01/2005
<b>Flight Time:</b>	7620 hours (Total, all aircraft), 70 hours (Total, this make and model), 7500 hours (Pilot In Command, all aircraft), 71 hours (Last 90 days, all aircraft), 23 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Manufacturer:</b>	Beech	<b>Registration:</b>	N700NC
<b>Model/Series:</b>	A100	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	No
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	B-138
<b>Landing Gear Type:</b>	Retractable - Tricycle	<b>Seats:</b>	10
<b>Date/Type of Last Inspection:</b>	09/01/2005, Continuous Airworthiness	<b>Certified Max Gross Wt.:</b>	11500 lbs
<b>Time Since Last Inspection:</b>		<b>Engines:</b>	2 Turbo Prop
<b>Airframe Total Time:</b>	13033 Hours	<b>Engine Manufacturer:</b>	Pratt & Whitney
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	PT6-28
<b>Registered Owner:</b>	Ascension Aviation LLC	<b>Rated Power:</b>	680 hp
<b>Operator:</b>	North Country Aviation, Inc	<b>Air Carrier Operating Certificate:</b>	On-demand Air Taxi (135)
<b>Operator Does Business As:</b>		<b>Operator Designator Code:</b>	NACA

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Night/Dark
Observation Facility, Elevation:	ANJ, 716 ft msl	Observation Time:	0155 EST
Distance from Accident Site:	0 Nautical Miles	Direction from Accident Site:	0°
Lowest Cloud Condition:	Thin Broken / 900 ft agl	Temperature/Dew Point:	0° C / 0° C
Lowest Ceiling:	Overcast / 1300 ft agl	Visibility	2.5 Miles
Wind Speed/Gusts, Direction:	7 knots, 340°	Visibility (RVR):	
Altimeter Setting:	29.7 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	Light - Snow; Mist		
Departure Point:	Traverse City, MI (TVC)	Type of Flight Plan Filed:	IFR
Destination:	Sault Ste Marie, MI (ANJ)	Type of Clearance:	IFR
Departure Time:	0110 EST	Type of Airspace:	

## Airport Information

Airport:	Sault Ste Marie/Sanderson (ANJ)	Runway Surface Type:	Asphalt
Airport Elevation:	716 ft	Runway Surface Condition:	Ice; Slush covered; Snow; Wet
Runway Used:	32	IFR Approach:	VOR
Runway Length/Width:	5235 ft / 100 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 None	Latitude, Longitude:	46.479167, -84.368333

## Administrative Information

Investigator In Charge (IIC):	Mitchell F Gallo	Adopted Date:	08/30/2007
Additional Participating Persons:	Carolyn Remol; Federal Aviation Administration; Grand Rapids, MI		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinquiry@ntsb.gov">pubinquiry@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

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