



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Lewistown, MO	<b>Accident Number:</b>	CEN09LA100
<b>Date &amp; Time:</b>	12/23/2008, 1500 CST	<b>Registration:</b>	N20NL
<b>Aircraft:</b>	Beechcraft 390	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Loss of control on ground	<b>Injuries:</b>	4 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Business		

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## Analysis

Prior to departure, the pilot was informed that it had been raining; the roads were wet, but no mention of ice at his destination. During the approach to the destination airport, the runway appeared "wet", and a normal approach and landing was attempted. The airplane touched down at 110 knots, the pilot "then deployed lift dump and [then applied the] brakes". Unable to get braking action, the pilot tried to slide the airplane "left and right" to get traction, but could not. The airplane departed the south end of the 4,370-foot-long runway, went over the edge of an embankment and stopped next to a levee. There were no reported pre-impact malfunctions with the airplane. The Manufacturer Approved Airplane Flight Manual Supplement for Airplanes Operating on Wet and Contaminated Runways; General Information Section, states operations on runways contaminated with ice or wet ice are not recommended and no operational information is provided. Using the supplement, the anticipated landing distance on a wet runway was calculated to be about 3,400 feet, the anticipated landing distance on an uncontaminated runway was calculated to be approximately 2,800 feet, and the prescribed landing speed ( $V_{ref}$ ) was determined to be about 111 knots. A braking action (runway condition) report for the private airfield's runway did not exist, nor was one required.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's loss of directional control during landing on an ice-contaminated runway.

## Findings

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<b>Aircraft</b>	Directional control - Not attained/maintained (Cause)
<b>Personnel issues</b>	Aircraft control - Pilot (Cause)
<b>Environmental issues</b>	Snow/slush/ice covered surface - Effect on equipment

## Factual Information

On December 23, 2008, about 1500 Central Standard Time, a Beechcraft Model 390 (Premier I) twin-engine business jet, N20NL, sustained substantial damage after landing and departing the runway surface at the Sharpe Farms Airport (MO09), Lewistown, Missouri. The crew of two pilots and two passengers were not injured. The airplane was registered to CNS Corporation and operated by the pilot. An instrument rules flight plan was filed for the Title 14 Code of Federal Regulations Part 91 cross-country flight. The flight originated from the Charles B. Wheeler Downtown Airport Kansas City, Missouri, with MO09 as its intended destination.

According to the pilot, he broke out of the clouds at 2,200 feet with the airfield in sight and that the runway appeared "wet". He stated that they "touched down at 110 knots, deployed lift dump, and [then] brakes". The pilot confirmed the anti-skid chatter in the brakes, and kept brake application. After touchdown the pilot thought about doing a go-around; however, due to the length of runway remaining, and the time required to produce full power for rotation/climb-out, he continued his attempt to try and stop the airplane on the runway. The pilot added that he tried to slide the airplane both, "left and right" trying to get traction, but could not. The airplane departed the south end of the runway, went over the edge of an embankment, and stopped next to a levee. The crew and passengers opened the cabin door and exited the airplane normally.

The pilot added that prior to departure, he talked with a couple people (at Lewistown) and that they told him that it had been raining; the roads were wet, but no mention of ice.

The pilot reported no pre-impact malfunctions with the airplane.

The airplane was powered by two Williams FJ44 turbo-fan engines, and not equipped with thrust reversers.

The Manufacturer Approved Airplane Flight Manual Supplement for Airplanes Operating on Wet and Contaminated Runways; General Information Section, states operations on runways contaminated with ice or wet ice are not recommended and no operational information is provided. A runway is considered as wet when there is sufficient moisture on the surface to cause it to appear reflective, but without significant areas of standing water. Using the supplement, the anticipated landing distance on a wet runway was calculated to be about 3,400 feet, the anticipated landing distance on an uncontaminated runway was calculated to be approximately 2,800 feet, and the prescribed landing speed (Vref) was determined to be about 111 knots.

Sharpe Farms Airport (MO09) is a private use airfield and has a single runway oriented in a 13/31 configuration. Runway 13 was reported to be a 4,370-foot long, asphalt runway. A braking action (runway condition) report for the runway did not exist, nor was one required.

## History of Flight

Landing-landing roll	Loss of control on ground (Defining event) Runway excursion
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## Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	52, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<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>	12/26/2007
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	01/18/2007
<b>Flight Time:</b>	13750 hours (Total, all aircraft), 1927 hours (Total, this make and model), 13500 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 40 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Co-Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	23, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<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>	04/03/2008
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	05/10/2008
<b>Flight Time:</b>	1005 hours (Total, all aircraft), 155 hours (Total, this make and model), 805 hours (Pilot In Command, all aircraft), 150 hours (Last 90 days, all aircraft), 50 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Beechcraft	Registration:	N20NL
Model/Series:	390	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	RB-106
Landing Gear Type:	Tricycle	Seats:	8
Date/Type of Last Inspection:	09/01/2008, AAIP	Certified Max Gross Wt.:	
Time Since Last Inspection:		Engines:	2 Turbo Fan
Airframe Total Time:	1927 Hours	Engine Manufacturer:	Williams
ELT:	Installed, not activated	Engine Model/Series:	FJ-44
Registered Owner:	CNS CORPORATION	Rated Power:	2300 lbs
Operator:	CNS CORPORATION	Air Carrier Operating Certificate:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	UIN	Observation Time:	1450 CST
Distance from Accident Site:	29 Nautical Miles	Direction from Accident Site:	289°
Lowest Cloud Condition:	Thin Overcast / 1600 ft agl	Temperature/Dew Point:	-1 °C
Lowest Ceiling:	Overcast / 2200 ft agl	Visibility	10 Miles
Wind Speed/Gusts, Direction:	15 knots, 120°	Visibility (RVR):	
Altimeter Setting:		Visibility (RVV):	
Precipitation and Obscuration:	No Precipitation		
Departure Point:	KC Downtown, MO (MKC)	Type of Flight Plan Filed:	IFR
Destination:	Lewistown, MO (MO09)	Type of Clearance:	IFR
Departure Time:		Type of Airspace:	

## Airport Information

Airport:	Sparpe Farms Airport (MO09)	Runway Surface Type:	Asphalt
Airport Elevation:		Runway Surface Condition:	Ice; Snow; Wet
Runway Used:	13	IFR Approach:	Visual
Runway Length/Width:	4370 ft / 65 ft	VFR Approach/Landing:	Straight-in

## Wreckage and Impact Information

Crew Injuries:	2 None	Aircraft Damage:	Substantial
Passenger Injuries:	2 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	4 None	Latitude, Longitude:	

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Craig Hatch	<b>Adopted Date:</b>	12/29/2009
<b>Additional Participating Persons:</b>	Norman Loftsgard; Federal Aviation Administration; St. Louis, MO Paul Yoos; Hawker Beechcraft; Wichita, KS		
<b>Publish Date:</b>	12/29/2009		
<b>Investigation Docket:</b>	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:pubinq@ntsb.gov">pubinq@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> .		

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