Aviation Investigation Final Report

Location:	Webster, Wisconsin	**Accident Number:**	CHI04FA045
Date & Time:	December 20, 2003, 14:10 Local	**Registration:**	N1275X
Aircraft:	Mooney 20E	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	2 Fatal
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The airplane was destroyed while maneuvering at low altitude when it impacted an ice covered lake in a steep nose down attitude. One witness reported that he observed the pilot preflight and start the airplane. He reported that the airplane sounded "okay" during taxi and takeoff. Witnesses to the accident reported seeing the airplane flying low over the lake. One witness stated the airplane's altitude was between 60 - 100 feet above ground level (agl). The witnesses reported seeing the airplane enter a steep climb to about 300 feet agl. Then the airplane reversed direction and entered a steep descent and impacted the ice. One witness reported the airplane "went straight up in the air about 200 feet, made a hairpin turn, and came straight down, hitting the ice nose first." The engine, landing gear, and cockpit of the cabin broke through the ice and remained submerged. The wings and the rest of the fuselage were intact and remained on top of the ice. The post accident inspection of the airplane revealed no preexisting anomalies that could be associated with a pre-impact condition. One witness reported that it was common for the pilot to do low passes and maneuver at low altitude. Another witness reported that it was not uncommon for the pilot to perform "crop duster turns" at low altitudes.

Probable Cause and Findings

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

The pilot's inadequate decision to conduct a low altitude flight maneuver without sufficient altitude to maintain clearance from the terrain. Low altitude flight and ostentatious display are contributing factors.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings
1. (C) PLANNING/DECISION - INADEQUATE - PILOT IN COMMAND
2. (F) LOW ALTITUDE FLIGHT/MANEUVER - PERFORMED - PILOT IN COMMAND
3. (F) OSTENTATIOUS DISPLAY - PILOT IN COMMAND
4. TERRAIN CONDITION - WATER,FROZEN
5. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

HISTORY OF FLIGHT

On December 20, 2003, at 1410 central standard time, a Mooney 20E, N1275X, was destroyed while maneuvering when it impacted Hanscom Lake, near Webster, Wisconsin. The private pilot and passenger received fatal injuries. The 14 CFR Part 91 flight departed Voyager Village Airstrip (9WN2), Webster, Wisconsin, at 1405, and was en route to Crystal Airport (MIC), Minneapolis, Minnesota. Visual meteorological conditions prevailed. No flight plan was filed.

One witness, who was the son of the accident pilot, reported that he had driven the pilot and passenger to the airport from their nearby lake cabin. He observed the pilot preflight and start the airplane. He reported that the airplane sounded "okay" during taxi and takeoff. The witness returned to the lake cabin and saw the airplane fly over the cabin about 200 - 300 feet above the cabin in the direction of the lake. The witness went back into the cabin and was unaware of the accident until emergency vehicles started arriving at the lake.

Witnesses to the accident reported seeing the airplane flying low over the lake. One witness stated the airplane's altitude was between 60 - 100 feet above ground level (agl). The witnesses reported seeing the airplane enter a steep climb to about 300 feet agl. Then the airplane reversed direction and entered a steep descent and impacted the ice. One witness reported the airplane "went straight up in the air about 200 feet, made a hairpin turn, and came straight down, hitting the ice nose first." Some witnesses heard the engine making "popping" or "backfiring noises," and other witnesses did not notice any strange or "different" engine noises.

The aircraft impacted the ice covered lake in the northeast corner of Hanscom Lake.

PERSONNEL INFORMATION

The pilot was a private pilot with a single-engine land rating and an airplane instrument rating. He held a Third Class medical certificate. He had about 1,289 total flight hours. The pilot completed a Biennial flight review on April 6, 2003.

AIRCRAFT INFORMATION

The airplane was a single-engine Mooney 20E, serial number 148. The airplane seated four and had a maximum gross weight of 2,740 pounds. The engine was a 200 horsepower Lycoming IO-360-A1A engine. The last annual inspection was conducted on November 15, 2003. The airplane had flown 5 hours since the last annual inspection and had a total tachometer time of 5,859 hours.

METEOROLOGICAL INFORMATION

At 1455, the observed weather at Burnett County Airport (RZN), Siren, Wisconsin, located about five nautical miles south of Webster, Wisconsin, was: Winds 170 degrees at 9 knots, sky clear, visibility 10 statute miles, temperature 2 degrees C, dew point - 6 degrees C, and altimeter 29.83 inches of mercury.

WRECKAGE AND IMPACT INFORMATION

The airplane impacted the ice in a steep nose down attitude of approximately 70-80 degrees. The engine, landing gear, and cockpit of the cabin broke through the ice and remained submerged. The wings and the rest of the fuselage were intact and remained on top of the ice. The wings exhibited leading edge crush along the span of both wings.

The airplane wreckage was recovered from the lake and transported to a facility near Lakeville, Minnesota, for inspection and storage. The wings, engine and cockpit were separated from the fuselage for transport to the storage facility.

Flight control cable continuity could not be established due to impact damage and/or the cables being cut for transportation purposes. All flight control cable breaks were consistent with an overload failure or from cutting the cables. All flight control surfaces control remained attached to their respective hinges. The inspection of the wings revealed that the aileron control cables were attached to their respective aileron bellcranks. The aileron cables had been cut near the wing root. The tailcone and empennage remained intact. The control cables remained attached to the rudder horn and the elevator bellcrank and the cables were traced to the cabin. The inspection of the cockpit revealed that the control cables remained attached to the rudder pedals and control yoke.

The engine inspection revealed that the crankshaft rotated and continuity was confirmed to all aft gears and rocker arms. Thumb compression and suction was confirmed to all cylinders. The right magneto had spark from all the leads at the right magneto cap. The left magneto was full of water and did not exhibit spark. The engine driven fuel pump plunger operated. Fuel was found in the fuel servo body, and the fuel servo inlet screen did not contain debris.

One of the propeller blades was bent aft about 90 degrees at mid-span. The outer section of the blade exhibited blade twist toward low pitch. The other blade exhibited abrasion to the leading edge and blade twist toward low pitch.

MEDICAL AND PATHOLOGICAL INFORMATION

The autopsy of the pilot was conducted at Midwest Forensics, Anoka, Minnesota.

A Forensic Toxicology Fatal Accident Report was prepared by the Federal Aviation

Administration's Civil Aeromedical Institute. The report on the pilot was negative for all substances tested.

ADDITIONAL INFORMATION

A witness, who had flown with the accident pilot about five times, reported that it was common for the pilot do low passes and maneuver at low altitude. He described the pilot as a risk taker and an aggressive pilot who "put the airplane in situations where there really was no out."

The son of the pilot reported that it was not uncommon for the pilot to perform "crop duster turns." He reported that the pilot had been flying for 14 years and it was about 10 years ago that the pilot started doing the crop duster type turns. The witness described the maneuver as a steep climb of 70 degrees angle of climb and then turning. He reported that the pilot tried to maintain at least 80 mph during the maneuver.

The parties to the investigation were the Federal Aviation Administration and Textron Lycoming.

The aircraft wreckage was released to Wentworth Aircraft Inc.

Pilot Information

Certificate:	Private	**Age:**	47,Male
Airplane Rating(s):	Single-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:**	Yes
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	April 24, 2002
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 6, 2003
Flight Time:	1289 hours (Total, all aircraft), 1216 hours (Pilot In Command, all aircraft), 6 hours (Last 90 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N1275X
Model/Series:	20E	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	148
Landing Gear Type:	Retractable - Tricycle	**Seats:**	4
Date/Type of Last Inspection:	November 15, 2003 Annual	**Certified Max Gross Wt.:**	2740 lbs
Time Since Last Inspection:	5.2 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	5856.8 Hrs at time of accident	**Engine Manufacturer:**	Lycoming
ELT:	Installed, activated, did not aid in locating accident	**Engine Model/Series:**	IO-360-AIA
Registered Owner:	Peter C. Naab	**Rated Power:**	200 Horsepower
Operator:	Peter C. Naab	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	RZN,989 ft msl	**Distance from Accident Site:**	5 Nautical Miles
Observation Time:	14:55 Local	**Direction from Accident Site:**	180°
Lowest Cloud Condition:	Clear	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	9 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	170°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.82 inches Hg	**Temperature/Dew Point:**	2°C / -6°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Webster, WI (9WN2)	**Type of Flight Plan Filed:**	None
Destination:	Minneapolis, MN (MIC)	**Type of Clearance:**	None
Departure Time:	14:05 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	Voyager Village Airstrip 9WN2	**Runway Surface Type:**	
Airport Elevation:	1020 ft msl	**Runway Surface Condition:**	
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	None

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	1 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Fatal	**Latitude, Longitude:**	45.908611,-92.25222

Administrative Information

Investigator In Charge (IIC):	Silliman, James
Additional Participating Persons:	Scott Thompson; Federal Aviation Administration; Minneapolis, MN Greg Erikson; Textron Lycoming; Wayne, IL
Original Publish Date:	April 28, 2005
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=58525