



National Transportation Safety Board Aviation Accident Final Report

Location:	Port Alsworth, AK	Accident Number:	ANC05LA027
Date & Time:	02/09/2005, 1110 AST	Registration:	N206AR
Aircraft:	Cessna U206	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 Fatal, 2 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

Analysis

The commercial pilot was on a personal flight with his immediate family, returning to his home/business on the shore of a remote lake adjacent to an airport. He had received forecast and current weather reports indicating an approaching cold/occluded front and deteriorating VFR weather conditions. The pilot transited a mountain pass into an area of rapidly deteriorating weather surrounding the destination lake. He reported that he elected to fly along the north shore of the frozen, snow-covered lake in moderate falling and blowing snow in visibility he estimated as about 1 mile, at an altitude of approximately 400 feet. He said that he thought he saw the south shoreline, close to his destination, and initiated a left turn toward the shoreline and over the lake. He indicated that once he was over the snow-covered white lake, with the white falling snow and overcast sky, he lost sight of the shoreline and turned to the right to return to the north shore. During the turn, he lost depth perception, descended, and collided with the lake, about 6 miles north-northeast of the destination airport. The airplane sank almost immediately, and the pilot said he had to cut his seatbelt to get out. He said he was unable to rescue any of his 3 passengers, his juvenile daughters, before the airplane sank in about 800 feet of water. The pilot's wife was also able to get out of the airplane, and they both hiked to a remote, unoccupied cabin to await rescue. The reported weather at the destination airport, approximately 37 minutes after the accident, was: Wind, 320 at 12 knots; visibility, one-half mile in heavy snow; sky, vertical visibility 200 feet, ceiling indefinite. The elevation of Lake Clark is approximately 260 feet msl.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's continued VFR flight into instrument meteorological conditions (IMC), his improper in-flight planning and decision making, and his failure to maintain clearance from terrain while maneuvering to reverse direction at a low altitude. Factors associated with the accident are snow, a low ceiling, whiteout conditions, and a low altitude maneuver initiated by the pilot.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE

Findings

1. (F) WEATHER CONDITION - SNOW
2. (F) WEATHER CONDITION - LOW CEILING
3. (F) WEATHER CONDITION - WHITEOUT
4. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
5. (C) IN-FLIGHT PLANNING/DECISION - IMPROPER - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: MANEUVERING - TURN TO REVERSE DIRECTION

Findings

6. TERRAIN CONDITION - FROZEN
7. TERRAIN CONDITION - SNOW COVERED
8. (F) LOW ALTITUDE FLIGHT/MANEUVER - ATTEMPTED - PILOT IN COMMAND
9. (C) ALTITUDE/CLEARANCE - NOT MAINTAINED - PILOT IN COMMAND

Factual Information

On February 9, 2005, about 1110 Alaska standard time, a wheel-equipped Cessna U206 airplane, N206AR, sustained substantial damage when it collided with the ice-covered surface of Lake Clark and sank, about 6 nautical miles north-northeast of Port Alsworth, Alaska. The commercial certificated pilot and one passenger sustained minor injuries; the remaining three passengers received fatal injuries. The 14 CFR Part 91 personal cross-country flight departed Merrill Field, Anchorage, Alaska, at 0939, and the destination was Port Alsworth. Visual meteorological conditions prevailed at the departure airport. Instrument meteorological conditions prevailed at the accident site. No flight plan was filed for the flight.

According to a friend who is a pilot and was flying in another airplane as a passenger, the airplane he was in arrived at Port Alsworth about the time the accident airplane would have been in the vicinity of Lake Clark (Port Alsworth is located on the south shore of Lake Clark). The friend said the airplane he was a passenger in was piloted by the accident pilot's father-in-law, and that they had departed Merrill Field about 30 minutes after the accident airplane. They had been in intermittent radio contact with the accident pilot for roughly the first half of the flight. The accident pilot had elected to transit Lake Clark Pass to reach Port Alsworth, and the pilot of the second, faster airplane, had flown a similar route, but higher, on top of the overcast. When the accident pilot did not arrive at Port Alsworth, and they could not establish radio contact with him, the friend took his Piper PA-18 airplane equipped with skis, and went searching for him. He discovered the accident site, and later the two survivors, who had exited the airplane as it sank, and were able to hike about 3 miles to a cabin. The pilot/friend noted that he was told by the accident pilot that there were no mechanical problems with the airplane, and that the accident pilot, who has a home and a guiding/air taxi business in Port Alsworth and is very familiar with the topography around the lake, had flown along the north shore of Lake Clark to keep a visual reference with the land, and then turned south-southwest to fly across the lake to Port Alsworth. In the process of crossing the white surface of the lake, the friend said the accident pilot related he was flying low, a few hundred feet above the lake in blowing snow and whiteout conditions, when the airplane collided with the surface of the lake, and sank almost immediately. The pilot had to cut himself free from his seatbelt with a knife, but was unable to rescue any of the passengers, his juvenile daughters, prior to the airplane sinking. The pilot's wife was also able to exit the airplane, and assisted him onto the lake ice. The elevation of Lake Clark is approximately 260 feet msl.

The accident airplane sank in water estimated at 800 feet deep. No recovery efforts have been initiated, and it is unknown if the airplane will be recovered.

In the pilot's written statement to the NTSB, dated February 19, the pilot wrote: "Following beach on North side of lake, S.W. bound 500 feet with 1-5 miles visibility. Vis went to 1 mile plus a little, and I thought I saw beach on south shore of Lake Clark. As I turned towards other side of lake I lost south shoreline so turned back to North shoreline which was still in view. White sky blended with white ice and I descended into the ice of Lake Clark while in a right turn. I still had over 1 mile visibility but lost depth perception without realizing that I had. If I would have realized that I had lost depth perception then I would have switched to the instruments and GPS." The pilot also indicated that there was a moderate snowfall, and blowing snow, with the prevailing wind out of the southwest at 15 to 18 knots.

The pilot received three weather briefings for the accident flight route from FAA Kenai

Automated Flight Service Station (AFSS) specialists prior to the accident flight. The first briefing was on February 8, the day before the accident flight, at 1618. The pilot stated to the specialist that he wanted to do a VFR flight "right away" through Big River Lakes and Lake Clark Pass, and asked for current weather conditions en route. The AFSS specialist reported that the Lake Clark pass was estimated to be closed due to low clouds, and reported that Lake Iliamna, an airport approximately 25 miles south of Port Alsworth, had recently reported the visibility to be 3/4 of a mile in light snow and fog, scattered clouds at 100 and 1,400 feet, and overcast at 2,100 feet. The pilot responded that he would try the flight tomorrow morning, and would call back for an update. The second briefing started at 0804 on February 9, an hour and 35 minutes prior to the flight's departure from Anchorage. The pilot's request was similar to his previous request. The AFSS noted that there was a cold front, and an associated occluded front approaching the pilot's intended route of flight, with lower ceilings and reduced visibility and marginal visual flight rules weather forecast by the afternoon. The specialist noted that the previous hour's weather had been good VFR at Iliamna, but was now "marginal" due to a visibility of 7 miles in light snow, and a ceiling of 1,400 feet overcast. Weather from Port Alsworth, a contract station, had not yet been received. The third briefing was initiated at 0922, 17 minutes prior to the pilot's departure. The pilot requested current weather reports for Big River Lakes through Merrill Pass and Port Alsworth. Big River lakes was reported as, visibility one and one-quarter miles in light snow, ceiling indefinite/sky obscured at 2,000 feet. Port Alsworth reported 5 miles visibility with light snow, and a ceiling of 2,000 feet overcast. The Lake Clark Pass was estimated to be closed. The specialist also gave the weather for Iliamna, which was 3 miles visibility in light snow and mist, few clouds at 1,800 feet, broken at 2,500 feet, overcast at 3,800 feet. The pilot responded with "Okay, well that's about all I need for now."

Copies of FAA-provided transcripts of communications between the accident pilot and FAA air traffic control facilities and AFSS specialists are included in the docket for this report.

A review of the available hourly weather observations on the day of the accident at Port Alsworth, for the period 0700 to noon, disclosed observations for 0857 (0900) and 1147 (noon). The observations for 1000 and 1100 were not in the National Weather Service (NWS) system, and therefore not available to the AFSS specialists. The NTSB investigator-in-charge discussed the process by which the contract weather observers enter their observations into the weather database with the NWS Alaska Region's Surface Observation Program Manager. He stated that the contract observers enter their observations into a computer through a dial-up network into the FAA digital aviation weather network (DAWN) system, and the information then becomes available to the FAA specialists. He noted that the dial-up procedure does not always work, due to connectivity or operator errors, but if the observer is aware of a malfunction, they are directed to call a dedicated AFSS with the weather information. The program manager produced a copy of the daily observation logs for Port Alsworth that were routinely forwarded by the observer to the NWS Alaska Region. The hand-written log for February 9 had the observations missing from the DAWN database. The 0955 (1000) observation was, in part: Wind, 290 at 12 knots, visibility, 5 miles in light snow, sky conditions, 1,500 feet overcast. The 1058 (1100) observation was, in part: Wind, 290 at 15 knots, visibility 1 mile in light snow, sky conditions, 300 feet overcast. The previously reported 1147 (noon) observation was: Wind, 320 at 12 knots, visibility one-half mile in heavy snow, sky conditions, vertical visibility 200 feet, indefinite ceiling.

Pilot Information

Certificate:	Commercial	Age:	38, Male
Airplane Rating(s):	Multi-engine Land; Single-engine Land; Single-engine Sea	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	Seatbelt
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:	11/01/2004
Occupational Pilot:		Last Flight Review or Equivalent:	
Flight Time:	10000 hours (Total, all aircraft), 700 hours (Total, this make and model), 10000 hours (Pilot In Command, all aircraft), 70 hours (Last 90 days, all aircraft), 20 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N206AR
Model/Series:	U206	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	U20604766
Landing Gear Type:	Tricycle	Seats:	6
Date/Type of Last Inspection:	08/01/2004, 100 Hour	Certified Max Gross Wt.:	3600 lbs
Time Since Last Inspection:		Engines:	1 Reciprocating
Airframe Total Time:		Engine Manufacturer:	Continental
ELT:	Installed, not activated	Engine Model/Series:	IO-520
Registered Owner:	Canoe Bay Outfitters	Rated Power:	300 hp
Operator:	Jeremy S. Davis	Operating Certificate(s) Held:	On-demand Air Taxi (135)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument Conditions	Condition of Light:	Day
Observation Facility, Elevation:	PALJ, 288 ft msl	Distance from Accident Site:	6 Nautical Miles
Observation Time:	1147 AST	Direction from Accident Site:	200°
Lowest Cloud Condition:		Visibility	0.5 Miles
Lowest Ceiling:	Indefinite (V V) / 200 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	12 knots /	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.21 inches Hg	Temperature/Dew Point:	-12°C / -16°C
Precipitation and Obscuration:			
Departure Point:	Anchorage, AK (MRI)	Type of Flight Plan Filed:	None
Destination:	Port Alsworth, AK (PALJ)	Type of Clearance:	None
Departure Time:	0939 AST	Type of Airspace:	

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	3 Fatal, 1 Minor	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Fatal, 2 Minor	Latitude, Longitude:	60.282222, -154.208333

Administrative Information

Investigator In Charge (IIC):	James D La Belle	Report Date:	12/20/2005
Additional Participating Persons:	Steven Stewart; FAA, Anchorage Flight Standards District Office; Anchorage, AK		
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 pubinquiry@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).