Aviation Investigation Final Report

Location:	Ketchikan, Alaska	**Accident Number:**	ANC07FA068
Date & Time:	July 24, 2007, 14:05 Local	**Registration:**	N995WA
Aircraft:	de Havilland DHC-2	**Aircraft Damage:**	Destroyed
Defining Event:		**Injuries:**	5 Fatal
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled - Sightseeing		

Analysis

The air taxi float-equipped airplane was the second of three airplanes on an air tour flight over a remote scenic area in southeast Alaska. As the flight of three airplanes flew into mountainous terrain, the first pilot reported low clouds, with rain and fog, which required him to descend to 700 feet msl to maintain VFR flight conditions. The pilot of the third tour airplane, which was about 5 minutes behind the accident airplane, stated that as he approached the area around the accident site, he encountered "a wall of weather" which blocked his intended flight route, and he turned around. The accident airplane's fragmented wreckage was discovered in an area of steep, tree-covered terrain, about 2,500 feet msl, near the area where the third airplane turned around. The NTSB discovered no mechanical problems with the airplane during postaccident inspections. An NTSB weather study revealed instrument meteorological conditions in the area at the time of the accident. Photographs recovered from a passenger's camera depicted deteriorating weather conditions as the flight progressed. A charter boat captain, who had seen numerous float-equipped tour airplanes operating in adverse weather conditions, called the local FAA Flight Standards District Office (FSDO) 9 days before the accident, to report his sightings. According to the FAA, no specific tour operator could be identified during their ensuing investigation, and no enforcement actions or additional surveillance of any operators was initiated. According to the FSDO manager, the local FSDO had lost inspectors due to downsizing. He reported they had not attempted to observe operators' adherence to weather minimums via ground-based viewing locations along the heavily traveled tour routes, and noted that FAA inspectors used to purchase air tour tickets to provide en route, on-board surveillance, but had not done so for approximately the last 10 years. He noted that additional inspector assistance from other FAA offices was not requested.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's decision to continue under visual flight rules into an area of instrument metrological conditions. Contributing to the accident was the pilot's inadequate weather evaluation, and the FAA's inadequate surveillance of the commercial air tour operator.

Findings

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

Findings
1. WEATHER CONDITION - RAIN
2. WEATHER CONDITION - LOW CEILING
3. (C) VFR FLIGHT INTO IMC - CONTINUED - PILOT IN COMMAND
4. IMPROPER DECISION - PILOT IN COMMAND
5. (F) INADEQUATE SURVEILLANCE OF OPERATION - FAA(ORGANIZATION)
6. (F) WEATHER EVALUATION - INADEQUATE - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING

Findings
7. TERRAIN CONDITION - MOUNTAINOUS/HILLY

Factual Information

HISTORY OF FLIGHT

On July 24, 2007, about 1405 Alaska daylight time, a float-equipped de Havilland DHC-2 airplane, N995WA, was destroyed when it impacted mountainous tree-covered terrain, about 40 miles northeast of Ketchikan, Alaska. The airplane was being operated as a visual flight rules (VFR) sightseeing flight under the provisions of 14 Code of Federal Regulations (CFR) Part 135, when the accident occurred. The airplane was operated by Venture Travel LLC, dba Taquan Air Service, of Ketchikan. The airline transport pilot and the four passengers were fatally injured. Instrument meteorological conditions (IMC) were reported in the area at the time of the accident. The flight departed Ketchikan about 1319, for a tour through Misty Fjords National Monument. A company VFR flight plan was in effect.

During a telephone conversation with the National Transportation Safety Board (NTSB) investigator-in-charge (IIC) on July 24, the operator's president reported that the accident airplane departed Ketchikan as the second of three float-equipped de Havilland DHC-2 airplanes on air tour flights over the Misty Fjords National Monument. He said each airplane departed from Ketchikan about 5 minutes apart, and the standard route of flight was northeast, over an area of remote inland fjords, coastal waterways, and mountainous tree-covered terrain. The 1 hour and 15 minute flightseeing tour included a landing on one of the inland ocean fjords before returning to Ketchikan.

During an interview with the NTSB IIC on July 26, the pilot of the first tour airplane stated that initial weather conditions along his flight route consisted of about 10 miles visibility with an overcast layer about 1,500 feet msl. As the flight of three progressed into mountainous terrain, while approaching an area known as Punchbowl Lake, the pilot reported "there were lots of misty clouds hanging around the cliffs." The flight continued along the preplanned flight route, towards a shallow mountain pass known to local tour pilots as "the cut." The first pilot said that before entering the cut, he transmitted a radio message on a common radio frequency asking other tour pilots flying in the area if the cut was open, meaning was the weather good enough to fly through it. He said that an unknown pilot responded, saying that the cut was open, and that he would need to be about 2,500 msl to get through. The first pilot said that after passing through the cut he encountered low clouds, rain and fog, with a visibility of 2 to 3 miles. He said that he was able to maintain VFR flight conditions by descending to about 700 feet msl, over an ocean fjord. According to the pilot of the first tour airplane, he estimated that the second airplane, the accident flight, was about 5 to 7 minutes behind him.

In an interview with the NTSB IIC on July 26, the pilot of the third tour airplane stated that he was about 5 minutes behind the accident airplane as his airplane approached Punchbowl Lake. He said he heard the first airplane's pilot radio call inquiring about the weather

conditions in the cut, as well as the unknown pilot's response concerning current conditions within the cut. Additionally, he recalled hearing a standard position report from the accident airplane's pilot reporting that he was over Punchbowl Lake. The pilot of the third airplane stated that just after entering the cut, he encountered "a wall of weather" which blocked his intended flight route. He said that the weather conditions consisted of low clouds, rain, and fog. He said he turned around, took an alternate route, and completed his tour.

When the accident airplane failed to return to Ketchikan by 1435, and company dispatch personnel were unable to establish radio contact, a company aerial search was initiated. The flight was officially reported overdue to the Federal Aviation Administration (FAA) at 1500.

About 1730, the pilot of a Ketchikan based helicopter operator that joined the aerial search, discovered the airplane's fragmented wreckage in an area of steep, tree-covered terrain, about 2,500 feet msl.

PERSONNEL INFORMATION

The pilot held an airline transport pilot certificate with an airplane multiengine land rating, and commercial pilot privileges with airplane single-engine, airplane single-engine-sea rating. In addition, he held a commercial rotorcraft helicopter certificate, and instrument helicopter rating. He also held a flight instructor certificate with airplane single-engine land ratings. The pilot's most recent second-class medical certificate was issued on April 2, 2007, and contained the limitation that he must wear corrective lenses for near/distant and intermediate vision.

In the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1) submitted by the operator, the pilot's total aeronautical experience was listed as 5,273 hours, with 178 hours in the accident airplane make and model. The report noted that in the preceding 90 and 30 days prior to the accident, the pilot accrued a total of 178 hours and 91.7 hours.

According to operator's president, the accident pilot flew for other Part 135 and Part 121 operators in Arizona, flying de Havilland DHC-6 and DHC-8 airplanes, before being hired by Taquan Air Service.

A review of the accident pilot's personal pilot logbook, which was provided to the NTSB by a family member, revealed that on April 11, 2007, just before being hired by Taquan Air Service, the pilot obtained a single-engine sea rating from Kenmore Air, Kenmore, Washington. During his 3-day training course, he received about 3.1 hours of instruction flight time in a float-equipped Piper PA-18, followed by an .8-hour check ride.

During an interview with the NTSB IIC on July 26, Taquan Air Service's chief pilot said that the accident pilot first reported to work in Ketchikan on April 30, and he immediately began his initial ground and flight training.

A review of company training records revealed that the pilot completed his initial ground

training on May 4, which consisted of 34 hours of ground instruction, and included 2 hours of instruction concerning Controlled Flight Into Terrain (CFIT) avoidance. Taquan Air Service's chief pilot provided the CFIT avoidance training. Additionally, the pilot received 8 hours of ground training in the use and operation of the Capstone equipment installed in all Taquan Air Service airplanes. Taquan Air Service's director of operations provided the Capstone use and operation training.

On May 9, the pilot completed his initial flight training in float-equipped de Havilland DHC-2 airplanes. The pilot's most recent FAA Part 135.293 and 135.299 check ride was on May 9. Taquan Air Service's director of operations, the FAA approved company check airman, administered the check ride. Once the pilot completed the company's training program and passed a check ride, the pilot was officially hired. At that time, his total flight experience was reported to be 5,100 flight hours, with 10 hours of single-engine sea flight time, and 7 flight hours of flight time in Alaska.

From May 14, through May 29, the pilot received 10.5 flight hours of Initial Operating Experience (IOE) in float-equipped de Havilland DHC-2 airplanes, while flying to various locations served by Taquan Air Service. During the pilot's IOE period he flew with Taquan Air Service's director of operations, and chief pilot. On May 29, the pilot received a 1.1-hour route check along the Misty Fjords tour route, which was accomplished by Taquan Air Service's director of operations. The pilot was then assigned to fly float-equipped De Havilland DHC-2 airplanes at the company base in Ketchikan, eventually accruing 178 flight hours.

The pilot's normally scheduled duty day was from 0545 to 1945. In the three days prior to the accident, the pilot was off duty on July 21 and 22. On July 23, his duty day started at 0700, and he flew 2.5 hours. On the accident date of July 24, he flew 2.2 hours. The accident flight was the pilot's third Misty Fjords tour flight that day.

AIRCRAFT INFORMATION

According to the Pilot/Operator Aircraft Accident Report (NTSB Form 6120.1) submitted by the operator, the airplane had a total time in service of 17,356.0 flight hours. The most recent annual inspection of the engine and airframe was on May 26, 2007. The last recorded inspection of the engine and airframe was a 100-hour inspection, on July 21, 2007, about 20 hours before the accident. The engine was overhauled on May 31, 2005, by Covington Aircraft Engines, Inc., and had about 182.1 hours since overhaul. The airplane was equipped with Edo 4930 floats.

The FAA implemented national automatic dependent surveillance-broadcast (ADS-B) technology in Alaska, and the accident airplane was equipped with an avionics package as part of that program. Formerly known as Capstone, the joint industry/FAA program (which includes ground-based stations, satellites, and aircraft avionics) currently provides pilots with situational awareness by displaying the airplane's position over terrain, while using GPS technology, coupled with an instrument panel mounted, moving map display. Additionally, the

Capstone equipment installed in the accident airplane provided the pilot with color shading on the moving map, which depicts terrain elevation changes. Terrain displayed on the pilot's moving map that is within 300 feet of the airplane will be displayed in red, alerting the pilot of close proximity to terrain.

Although the effort in Alaska to utilize ADS-B is projected to also have the capability of presenting weather radar and textual observations to pilots, these enhancements were not fully implemented at the time of the accident.

METEOROLOGICAL INFORMATION

The closest official weather observation station was Ketchikan, 40 miles west-southwest of the accident site. On July 24, at 1353, an Aviation Routine Weather Report (METAR) was reporting, in part: Wind, 140 degrees at 9 knots; visibility, 10 statute miles; clouds and sky condition, 2,000 feet scattered, 2,600 feet broken, 3,100 feet overcast; temperature, 61 degrees F; dew point, 52 degrees F; altimeter, 30.13 inHg.

The next closest official weather observation station was Metlakatla, 41 miles south-southwest of the accident site. On July 24, at 1356, an Aviation Routine Weather Report (METAR) was reporting, in part: Wind, 190 degrees at 5 knots; visibility, 10 statute miles; clouds and sky condition, 2,500 feet few, 5,000 feet broken, 7,500 feet overcast; temperature, 61 degrees F; dew point, 55 degrees F; altimeter, 30.16 inHg.

The next closest official weather observation station was Annette Island Airport, Alaska, about 50 miles south-southwest of the accident site. On July 24, at 1354, an Aviation Routine Weather Report (METAR) was reporting in part: Wind, 150 degrees at 9 knots; visibility, 10 statute miles; a few clouds at 5,500 feet, ceiling 8,500 feet overcast; temperature, 61 degrees F; dew point, 52 degrees F; altimeter, 30.15 inHg.

Witnesses characterized the weather conditions along the accident airplane's route as very low visibility with rain, fog and varied layers of cloud cover.

An NTSB senior meteorologist conducted a weather study, which included satellite imagery around the accident site. The satellite imagery depicts a band of low stratiform clouds in the vicinity of the accident, and instrument metrological conditions (IMC) at the time of the accident. A copy of that report is included in the public docket for this accident.

WRECKAGE AND IMPACT INFORMATION

Continuous poor weather conditions prevented the NTSB IIC, and an FAA representative, from reaching the accident site until July 27.

All of the airplane's major components were found at the main wreckage site. The accident

site was an area of steep, mountainous, tree-covered terrain, at an elevation of about 2,500 feet msl.

An area believed to be the initial impact point was discovered atop a tundra-covered, rock outcropping, about 100 feet above the main wreckage point of rest. After initial impact, the fragmented airplane wreckage fell down the vertical embankment, and came to rest about 100 feet below the initial impact point. The airplane's left wing and left float were discovered next to the initial impact point. The left wing had extensive spanwise leading edge aft crushing, and the left float sustained extensive crushing damage to the front portion.

Scattered downslope of the 100-foot tall embankment, in a line between the initial impact point, and the final resting point of the main wreckage, were small portions of wreckage debris, paint chips, broken Plexiglas, and passenger personal effects. The airplane's severed right wing was discovered within the wreckage path, about 20 feet uphill from the main wreckage site. The right wing had extensive spanwise leading edge crushing.

The propeller bolts attaching the propeller to the engine crankshaft remained attached to the crankshaft flange. All three propeller blades were loose in the propeller hub, but remained attached to the propeller hub assembly. All three of the propeller blades had multiple leading edge gouges, substantial torsional "S" twisting, and chordwise scratching.

The engine assembly remained attached to the engine firewall, which was located within the fragmented wreckage. The engine sustained impact damage to the front and underside. The exhaust tubes were crushed upward. The crushed and folded edges of the exhaust tubes were not cracked.

The airplane's empennage was torn from its fuselage attachment point, but all of the flight control surfaces remained connected to their respective attach points.

Due to extensive impact damage, continuity of the flight control cables could not be established.

There were no preaccident mechanical problems discovered during the NTSB IIC's on-scene wreckage examination.

MEDICAL AND PATHOLOGICAL INFORMATION

A postmortem examination of the pilot was conducted under the authority of the Alaska State Medical Examiner, 4500 South Boniface Parkway, Anchorage, Alaska, on July 26, 2007. The cause of death for the pilot was attributed to blunt force, traumatic injuries.

The FAA's Civil Aeromedical Institute (CAMI) conducted a toxicological examination on August 24, 2007. The toxicological examination revealed that 0.497 ug/ml of citalopram, 0.151 ug/ml N-desmethylcitalopram and 0.065 ug/ml di-N-desmethylcitalopram were detected in the pilot's

blood, and unspecified levels of the same substances were detected in his urine samples. Citalopram and its metabolites (N-desmethylcitalopram, and di-N-desmethylcitalopram) are not distinguishable in FAA toxicology laboratory evaluations from escitalopram and its metabolites.

During a telephone conversation with the NTSB IIC on March 7, 2008, a family member confirmed that the pilot was being treated for depression, and that he pilot had been taking antidepressant medication, prescribed by his primary care physician. Additionally, the family member noted that the pilot had also been receiving treatment for high blood pressure [hypertension] and a thyroid disorder [hypothyroidism].

A review of the pilot's medical records by the NTSB's medical officer revealed a history of depression, for which the pilot was prescribed escitalopram following an emergency room visit on February 4, 2004 due to suicidal thoughts. There was no indication in the records reviewed of any formal psychiatric evaluation.

The FAA's guide for Aviation Medical Examiners states, in part: "The use of a psychotropic drug is considered disqualifying. This includes all sedatives, tranquilizers, antipsychotic drugs, antidepressant drugs, analeptics, anxiolytics, and hallucinogens."

A review of the pilot's most recent second-class medical certificate application dated April 2, 2007, revealed that the pilot indicated "No" in response to "Do You Currently Use Any Medications" and "No" to all items under "Medical History" except for "Yes" to "Hay fever or allergy." The application also notes a "No" to "Visits To Health Professional Within Last 3 Years."

SEARCH AND RESCUE

After being notified of an overdue airplane, and after learning about reports of an emergency locator transmitter (ELT) signal along the accident pilot's anticipated flight route, search and rescue personnel from the U.S. Coast Guard Air Station Sitka, the Civil Air Patrol, and other Taquan Air airplanes and pilots, began a search for the missing airplane.

About 1625, search airplanes tracked a faint ELT signal to the area of mountainous and tree-covered terrain, but were unable to search the upper levels of the area due to poor weather conditions. A helicopter from Temsco Helicopters, Inc., of Ketchikan, was dispatched to the suspected accident site, with members of the Ketchikan Volunteer Rescue Squad (KVRS). However, the helicopter pilot said that he was also unable to search the upper levels of the mountainous areas due to low ceilings and poor visibility. The helicopter pilot said that, after waiting for the weather conditions to improve, he was able to search the upper elevations of the search area, and he then located the wreckage about 1730. The KVRS team members reached the accident site, and confirmed that the airplane's occupants had sustained fatal injuries.

TESTS AND RESEARCH

Once the wreckage was recovered from the accident site, the engine was removed and shipped to an engine inspection facility. On September 19, 2007, at the direction of the NTSB IIC, an engine tear down and inspection was accomplished at Aero Engines, Inc., Los Angeles, California. The engine inspection revealed no preaccident mechanical anomalies.

An Alaska State Trooper recovered two impact damaged digital cameras while at the accident site, which the NTSB IIC obtained shortly after arriving in Ketchikan. The two damaged cameras were sent to the NTSB's Vehicle Recorders Laboratory in Washington, D.C. to attempt a recovery of the digital images stored on the media cards inside each camera.

An NTSB engineer successfully recovered the images from each media card. The engineer said that the date stamp on the most recently stored photos was Tuesday, July 24, 2007, the date of the accident. He added that one of the cameras appeared to have the correct time stamp display set to the current local time, but the other camera did not have the clock set correctly.

The NTSB IIC reviewed the images recovered from the cameras. The first series of photos show the accident airplane parked at the Taquan Air Service dock, with the accident passengers and the pilot standing next to the airplane. The next series of photos were taken after takeoff, with the city of Ketchikan below. The final series of photos, which were taken from the right side of the airplane, depicts a rapid decline of weather conditions as the flight progressed into an area of mountainous terrain.

The last recorded image, taken from the right side of the airplane, with a time stamp of 1355, about 10 minutes before the accident, revealed weather conditions consisting of low clouds, fog, and low visibility. An area of mountainous terrain can be seen in the background, which was shrouded by various layers of clouds.

ADDITIONAL INFORMATION

Southeast Alaska Air Tour Information

Ketchikan, as well as other Southeast Alaska cities, has become a popular stopover for many cruise ship operators during the summer tour season, which runs from May to September. In 2007, an estimated 899,638 cruise ship passengers visited Ketchikan. The number of cruise ship tourists for 2008 is projected to increase. There are a number of CFR 135 air tour operators in Ketchikan that cater to the cruise ship industry, and operate float-equipped de Havilland DHC-2 airplanes.

Public Complaints Regarding Misty Fjords Air Tours and FAA Response

On July 26, 2007, a charter boat captain that routinely operated his boat near the accident site,

contacted the NTSB IIC. He explained that he frequently saw float-equipped tour airplanes operating in and around the Misty Fjords National Monument, in weather conditions consisting of very low visibility, low ceilings, rain, and fog. He stated that he did not know exactly which operator he saw, but he reported, "they all do it, and it was just a matter of time before an accident happened."

The charter boat captain said that on July 16, 2007, 9 days before the accident, he called the FAA's Juneau Flight Standards District Office (FSDO) to file a formal complaint, but he was instead directed to a voice mail message, where he left a 4 minute-long voice mail message, and described his observations and concerns in detail.

During an interview with the NTSB IIC on July 29, 2007, the acting FSDO manager reported that an FAA operations inspector in the Juneau FSDO received the voicemail message from the charter boat captain, stating that on numerous occasions, he saw various "float planes flying into a wall of rain and fog" while conducting air tour flights over the Misty Fjords National Monument. According to the FAA inspector that initially received the voice mail message, the caller did not identify a specific operator and did not leave a name or contact phone number. The acting FSDO manager reported that when the complaint call was originally received at the Juneau FSDO, there was already an inspector in Ketchikan conducting surveillance. The acting FSDO manager said he contacted the inspector in Ketchikan, and informed him of the complaint, but no specific operator could be identified. The inspector in Ketchikan said he contacted a number of operators in Ketchikan in an attempt to identify the operator, but was unsuccessful.

No FAA enforcement actions or additional surveillance of any of the operators in Ketchikan were initiated. According to the acting FSDO manager, the voice mail recording was inadvertently erased.

Juneau FSDO Information

The FAA's Flight Standards District Office in Juneau has oversight and surveillance responsibilities of aviation activity in Southeast Alaska, from Yakutat, Alaska, to the southern end of the Alaska panhandle. Inspectors who are assigned to specific operators conduct surveillance of CFR Part 135 air tour operations. The number of operators assigned to each individual inspector is based, in part, on the complexity of each operator's flight operation, and is a balance of available personnel to the number of operators.

The FAA's national work program categorizes the complexity of required surveillance of an operator. The complexity of an operator's flight operation equates to complexity points. An inspector's pay grade is based, in part, on the amount of complexity points. The more complexity points assigned to a particular principal inspector could result in additional pay (pay grade) for that inspector.

During a postaccident interview on October 29, 2007, the manager of the Juneau FSDO

reported that, at the time of the accident, the aviation safety inspectors in the Juneau FSDO consisted of two principal airworthiness inspectors, two principal operations inspectors, one principal avionics inspector, and one newly hired airworthiness inspector. The FSDO manager said that at the time of the accident, the principal operations inspector for Taquan Air Service was assigned a CFR Part 141 flight school, and approximately 33 CFR Part 135 operators.

The Juneau FSDO manager explained that in recent history, the Juneau FSDO has been the subject of downsizing. As an example of the impact of downsizing and curtailing services, he said that the FSDO had not authorized any new air carrier certificates under CFR Part 135, 133, 137, or 141. The manager said that he could possibly get inspector assistance from another FSDO, but he had declined to do so because the Juneau FSDO could not provide continuing oversight.

The FSDO manager stated that for a short time, about 10 years ago, FAA inspectors from other FAA regions would purchase a seat on a tour, unannounced, and conduct en route surveillance of the operator's procedures relating to weather minimums adherence, flight path routes, and passenger briefings. He reported that this practice was a valuable tool for monitoring operators' practices in a real-world scenario. The manager said that this practice was discontinued for an unknown reason. When asked if FAA inspectors from the Juneau FSDO had attempted to observe operators' adherence to weather minimums via ground-based viewing locations throughout their area of responsibility, the FSDO manager said they had not.

Remote Weather Cameras

In 1995, the Safety Board published a safety study titled "Aviation Safety in Alaska," which examined the safety of aircraft operations in Alaska. Among the 23 recommendations produced from the study was a recommendation to install remote weather observation cameras along heavily traveled, low level VFR air routes, where, in some cases, weather was a factor in past aviation accidents, such as remote mountain passes. When available, near real time weather information is accessible by pilots via the Internet, for use in flight planning. Additionally, near real time weather camera information can be a tool for management personnel while maintaining operational control of flight operations.

Numerous weather remote cameras have since been installed in other locations in Alaska. However, no weather cameras have been installed along the air tour routes in Southeast Alaska, near Ketchikan, but more specifically, Misty Fjords National Monument.

NTSB Safety Recommendations Regarding Southeast Alaska Air Tours

On July 31, 2008, the Safety Board issued four safety recommendations to the FAA regarding Southeast Alaska air tour operations. They are as follows:

NTSB Recommendation Number A-08-59 -- Install and maintain weather cameras at critical areas of air tour routes within the Misty Fjords National Monument and other scenic areas in

Southeast Alaska that are frequently traveled by air tour operators.

NTSB Recommendation Number A-08-60 -- Develop a permanent mechanism to provide en route and ground-based observations of air tour flights in Southeast Alaska at least once a month during the tour season to ensure operators are adhering to safe flying practices.

NTSB Recommendation Number A-08-61 -- Develop, in cooperation with Southeast Alaska commercial air tour operators, aviation psychologists, and meteorologists, among others, a cue-based training program for commercial air tour pilots in Southeast Alaska that specifically addresses hazardous aspects of local weather phenomena and in-flight decision-making.

The complete letter can be found on the NTSB's web site at the following link: http://www.ntsb.gov/Recs/letters/2008/A08_59_62.pdf

Wreckage Release

The Safety Board released the wreckage to the owner's insurance representative on July 28, 2007. The Safety Board retained the engine until September 19, 2007, when it was also released to the owner's insurance representative. The passenger's camera media cards were retuned to the families on October 11, 2007.

Pilot Information

Certificate:	Airline transport; Flight instructor	**Age:**	56,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	Airplane single-engine	**Toxicology Performed:**	Yes
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	April 1, 2007
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	May 1, 2007
Flight Time:	5273 hours (Total, all aircraft), 178 hours (Total, this make and model), 2818 hours (Pilot In Command, all aircraft), 178 hours (Last 90 days, all aircraft), 92 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	de Havilland	**Registration:**	N995WA
Model/Series:	DHC-2	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	1100
Landing Gear Type:	Float	**Seats:**	8
Date/Type of Last Inspection:	July 1, 2007 100 hour	**Certified Max Gross Wt.:**	5090 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	17356 Hrs as of last inspection	**Engine Manufacturer:**	Pratt & Whitney
ELT:	Installed, activated, aided in locating accident	**Engine Model/Series:**	R-985
Registered Owner:	Thomas I. Carlin	**Rated Power:**	450 Horsepower
Operator:	Venture Travel LLC	**Operating Certificate(s) Held:**	On-demand air taxi (135)
Operator Does Business As:	Taquan Air	**Operator Designator Code:**	TQ0A

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:		**Distance from Accident Site:**	
Observation Time:		**Direction from Accident Site:**	
Lowest Cloud Condition:		**Visibility**	
Lowest Ceiling:		**Visibility (RVR):**	
Wind Speed/Gusts:	/	**Turbulence Type Forecast/Actual:**	/
Wind Direction:		**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:		**Temperature/Dew Point:**	
Precipitation and Obscuration:	Heavy - None - Drizzle		
Departure Point:	KETCHIKAN, AK (5KE)	**Type of Flight Plan Filed:**	Company VFR
Destination:	Ketchikan, AK (5KE)	**Type of Clearance:**	None
Departure Time:	13:19 Local	**Type of Airspace:**	

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Destroyed
Passenger Injuries:	4 Fatal	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	5 Fatal	**Latitude, Longitude:**	55.551387,-130.685562

Administrative Information

Investigator In Charge (IIC):	Johnson, Clinton
Additional Participating Persons:	Daniel P Diggins; Federal Aviation Administration, AAI-100; Washington , DC Kevin Roof; Taquan Air Service ; Ketchikan , AK
Original Publish Date:	August 13, 2008
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=66341