Aviation Investigation Final Report

Location:	Lopez Island, Washington	**Accident Number:**	WPR16LA189
Date & Time:	September 30, 2016, 08:37 Local	**Registration:**	N6781L
Aircraft:	DEHAVILLAND BEAVER DHC 2 MK.1	**Aircraft Damage:**	Substantial
Defining Event:	VFR encounter with IMC	**Injuries:**	2 Serious, 2 Minor
Flight Conducted Under:	Part 135: Air taxi & commuter - Scheduled		

Analysis

While maneuvering at low altitude for a water landing, the commercial pilot of the float-equipped airplane encountered low visibility due to ground fog. The pilot initiated a go-around, but the airplane impacted the water, bounced, and impacted the water a second time before coming to rest upright. The airplane subsequently sank and was not recovered. The pilot reported that there were no mechanical anomalies with the airplane that would have precluded normal operation. The operator further reported that other company pilots who were flying on the day of the accident stated that the low visibility conditions were easily avoided by a slight course deviation.

Probable Cause and Findings

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

The pilot's decision to land in an area of low visibility and ground fog, which resulted in collision with water.

Findings

Personnel issues	Decision making/judgment - Pilot
Personnel issues	Monitoring environment - Pilot
Aircraft	Altitude - Not attained/maintained
Environmental issues	Low visibility - Effect on operation

Factual Information

History of Flight

Enroute-descent	VFR encounter with IMC (Defining event)
Approach-VFR go-around	Collision with terr/obj (non-CFIT)

On September 30, 2016, at 0837 Pacific daylight time (PDT), a Dehavilland, Beaver DHC-2 MK1, N6781L, unintentionally impacted the water near Lopez Island, Washington, while descending through a break in a cloud layer. The airplane was registered to and operated by Kenmore Air Seaplanes under the provisions of 14 *Code of Federal Regulations* Part 135. The commercial pilot, and one passenger sustained minor injuries, two passengers sustained serious injuries. The airplane sustained substantial damage during the accident sequence, and subsequently sunk. The scheduled commuter flight departed Kenmore Air Harbor Seaplane Base (W55), Seattle, Washington, about 0800, with a planned destination of Fisherman Bay (81W), Washington. Visual and instrument meteorological conditions prevailed along the route of flight, and a company visual flight rules (VFR) flight plan had been filed.

In a statement submitted to the NTSB investigator-in-charge, the pilot reported that he departed W55 with three passengers, and that his first planned stop was 81W. As he initiated his descent just south of Cattle Pass at 2,000 ft, he observed breaks in the undercast north of the pass. The pilot stated that he could see the water at all times during the descent, and that he could see the destination "all the way down." The pilot further stated that he then completed the landing checklist, except for flaps, and at a certain point, before turning final to land north at 81W, he lost sight of the water. The pilot reported that when he realized the approach was no longer practical, he added go-around power, raised the nose, and initiated a go-around. Shortly thereafter, the airplane impacted the water, bounced, then impacted the water again. The pilot stated that after the airplane came to rest in an upright position, water began to enter the [cabin/cockpit areas]. The pilot mentioned that after he and his three passengers had successfully egressed the airplane and been in the water from between 35 to 45 minutes, they were rescued by a motor trawler and a local Sheriff's boat. The airplane sank and was not recovered.

The pilot reported no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

Air Airmen's Meteorological Information (AIRMET) SIERRA advisory for instrument flight rules (IFR) conditions, which was applicable for the accident site, was issued at 0745 PDT. It advised of ceilings below 1,000 ft above ground level (agl), visibility below 3 statute miles, mist and fog.

At 0753, the Automated Surface Observing System (ASOS) located at Friday Harbor Airport (FHR), Friday Harbor Washington, about 3.5 nm northwest of the accident location, reported wind calm, visibility 6 miles, mist, ceiling overcast at 300 ft agl, temperature 10° C, dew point 8° C, and an altimeter setting of 30.03 inches of mercury.

At 0853, the FHR weather reporting facility indicated wind 080° at 3 knots, visibility 9 miles, ceiling overcast 400 ft agl, temperature 10° C, dew point 8° C, and an altimeter setting of 30.06 inches of mercury. (Refer to the NTSB's Meteorological Specialist's report, which is appended to the docket for this accident.)

In the RECOMMENDATION section of the NTSB 6120.1 report, the operator opined that the accident occurred because of the pilot's decision to operate in an area in which there was at least some ground fog present in some areas, including at the accident site itself. According to other [company] pilots flying that morning, this area was easily avoidable with a slight flight path deviation to the west, where ceiling and visibility remained unrestricted. The operator further stated that any recommendations for prevention, therefore, must address the pilot's decision to operate where he did. Additionally, the operator referenced the Federal Aviation Administration's Risk Management Handbook (FAA-H-8083-2), stating, "...this addresses this need well, and would be the template followed for training."

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	69,Male
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	3-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	October 20, 2015
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	April 11, 2016
Flight Time:	25000 hours (Total, all aircraft), 1630 hours (Total, this make and model), 15000 hours (Pilot In Command, all aircraft), 202 hours (Last 90 days, all aircraft), 51 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

Passenger Information

Certificate:		**Age:**	57,Male
Airplane Rating(s):		**Seat Occupied:**	Rear
Other Aircraft Rating(s):		**Restraint Used:**	Lap only
Instrument Rating(s):		**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Passenger Information

Certificate:		**Age:**	54,Male
Airplane Rating(s):		**Seat Occupied:**	Right
Other Aircraft Rating(s):		**Restraint Used:**	3-point
Instrument Rating(s):		**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Passenger Information

Certificate:		**Age:**	Female
Airplane Rating(s):		**Seat Occupied:**	Right
Other Aircraft Rating(s):		**Restraint Used:**	Lap only
Instrument Rating(s):		**Second Pilot Present:**	No
Instructor Rating(s):		**Toxicology Performed:**	No
Medical Certification:		**Last FAA Medical Exam:**	
Occupational Pilot:	No	**Last Flight Review or Equivalent:**	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	DEHAVILLAND	**Registration:**	N6781L
Model/Series:	BEAVER DHC 2 MK.1 MARKI	**Aircraft Category:**	Airplane
Year of Manufacture:	1953	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	788
Landing Gear Type:	N/A; Float	**Seats:**	8
Date/Type of Last Inspection:	September 28, 2016 100 hour	**Certified Max Gross Wt.:**	5600 lbs
Time Since Last Inspection:		**Engines:**	1 Reciprocating
Airframe Total Time:	7395.1 Hrs as of last inspection	**Engine Manufacturer:**	Pratt & Whitney
ELT:	C126 installed, activated, aided in locating accident	**Engine Model/Series:**	R985AN/14B
Registered Owner:	KENMORE AIR HARBOR INC	**Rated Power:**	450 Horsepower
Operator:	KENMORE AIR HARBOR INC	**Operating Certificate(s) Held:**	Commuter air carrier (135)
Operator Does Business As:		**Operator Designator Code:**	GJRA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Instrument (IMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KFHR,109 ft msl	**Distance from Accident Site:**	4 Nautical Miles
Observation Time:	08:35 Local	**Direction from Accident Site:**	321°
Lowest Cloud Condition:	Thin Overcast / 400 ft AGL	**Visibility**	7 miles
Lowest Ceiling:	Overcast / 400 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	3 knots /	**Turbulence Type Forecast/Actual:**	/ None
Wind Direction:	80°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.05 inches Hg	**Temperature/Dew Point:**	10°C / 8°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SEATTLE, WA (W55)	**Type of Flight Plan Filed:**	None
Destination:	LOPEZ, WA (81W)	**Type of Clearance:**	None
Departure Time:	08:00 Local	**Type of Airspace:**	Class G

Airport Information

Airport:	FISHERMANS BAY 81W	**Runway Surface Type:**	Water
Airport Elevation:	0 ft msl	**Runway Surface Condition:**	Water-calm
Runway Used:		**IFR Approach:**	None
Runway Length/Width:		**VFR Approach/Landing:**	Traffic pattern;Valley/terrain following

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:	2 Serious, 1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Serious, 2 Minor	**Latitude, Longitude:**	48.464168,-122.95333(est)

Administrative Information

Investigator In Charge (IIC):	Jones, Patrick
Additional Participating Persons:	Curtis R Johnson; Federal Aviation Administration; Renton, WA
Original Publish Date:	July 5, 2018
Last Revision Date:	
Investigation Class:	Class
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=94049