National Transportation Safety Board
Aviation Accident Preliminary Report

Location:	Palo Alto, CA	**Accident Number:**	WPR18FA251
Date & Time:	09/04/2018, 1100 PDT	**Registration:**	N701JM
Aircraft:	Mooney M20J	**Injuries:**	1 Fatal, 1 Serious, 1 Minor
Flight Conducted Under:	Part 91: General Aviation - Personal		

On September 4, 2018, about 1100 Pacific daylight time, a Mooney M20J airplane, N701JM, impacted in a tidal flat shortly after a balked landing at Palo Alto Airport (PAO), Palo Alto, California. The private pilot/owner received fatal injuries. One passenger received serious injuries, and the other passenger received minor injuries. The airplane was substantially damaged. The airplane was operated under the provisions of 14 *Code of Federal Regulations* Part 91, and was a personal flight in the service of Angel Flight West. Visual meteorological conditions existed at PAO about the time of the accident.

According to its website, Angel Flight West is "a nonprofit, volunteer-driven organization that arranges free, non-emergency air travel for children and adults with serious medical conditions and other compelling needs. Our network of 1,400+ pilots throughout the 13 western states donate their aircraft, piloting skills, and all flying costs to help families in need..."

The pilot and airplane were based at Placerville Airport (PVF), Placerville, CA. On the day of the accident, the airplane arrived at Redding Municipal Airport (RDD), Redding, CA. about 0900 to pick up the patient and her mother, and transport them to PAO. Surveillance camera imagery at RDD indicated that the two passengers boarded, and that the airplane departed the RDD ramp about 0924. No fuel was added to the airplane at RDD.

About 7 minutes prior to landing at PAO, the pilot checked onto the PAO air traffic control tower (ATCT) frequency, and announced that he was "9.8 miles to the north" for landing. The ATCT controller instructed the pilot to enter a left base for runway 13. About 10 seconds later, the controller instructed the pilot to "fly to KGO" and then enter the left base for runway 13. The pilot stated that he was unfamiliar with "KGO," and the controller then explained that it was a set of radio towers, and described their location relative to a local highway. About 50 seconds later, the controller advised the pilot that the KGO towers were about 2.5 miles directly ahead of the airplane, and then instructed the pilot to fly to the Dumbarton Bridge. About 1 minute and 30 seconds later, (or about 3 minutes and 15 seconds before the landing), the controller advised another airplane that the Mooney was over the Dumbarton Bridge at an altitude of 900 feet. About 2 minutes and 45 seconds before the landing, the controller cleared the Mooney to land. About 50 seconds later the pilot reported that he was having difficulty

visually locating the airport, and in response, the controller advised him to turn to the final approach course. About 1 minute and 50 seconds later, the pilot reported that he was aborting the landing, and going around. The controller instructed the pilot to make "left closed traffic," and asked the pilot if he needed any assistance. The pilot responded in the negative, and stated that he "just came in too fast."

A certified flight instructor (CFI) and his student were situated approximately midfield on the parallel taxiway (taxiway Z), heading towards the runway 13 threshold. The CFI and his student watched the Mooney touch down, somewhere just forward of them. They saw the Mooney begin to "porpoise," oscillating in pitch and alternately contacting/bouncing between the main landing gear and the nose landing gear. They observed 3 to 4 cycles, and while that was occurring, they stated out loud (intra-cockpit) for the Mooney pilot to "go around." They then saw the Mooney lift off and the landing gear retract. At that point, the CFI ceased watching the Mooney, but his student continued to watch it. Very shortly thereafter, the student called the CFI's attention back to the Mooney. The CFI saw it enter a very steep left bank (70° to 80°) and watched the nose pitch sharply down (approximately 60°), and then descend very rapidly to the ground. The CFI and student reported that the Mooney began the turn at an altitude of about 150 to 200 feet, and that it essentially reversed course during the event. Other witnesses reported very similar observations.

The airplane impacted vegetation and a fence before striking the mud and water of the tidal flat. The final resting location was about 900 feet east of the runway 31 threshold. The airplane remained upright, in about 1 foot of water, about 30 feet from shore. The two passengers, who were both seated in the rear, were able to exit via the single cabin door, which was located on the right side of the airplane. The daughter, who was the patient being transported, received minor injuries. Her mother was seriously injured. Both were rescued by first responders, who also determined that the pilot was deceased.

The engine and propeller were partially separated from the fuselage, and were submerged in the mud. The instrument panel was severely disrupted, and the cockpit was partially crushed. The aft fuselage was slightly crumpled. Both wings were substantially damaged, and the outboard section of the left wing was fracture-separated at about the two-thirds span location. The left fuel tank appeared intact, and contained about 17 gallons of fuel. The right tank was found devoid of fuel. The landing gear and flaps were found in their respective retracted positions. A JP Instruments engine monitor was recovered from the wreckage, and retained for potential data download.

Federal Aviation Administration (FAA) records indicated that the airplane was manufactured in 1992, and that it was equipped with a Lycoming IO-360 series piston engine. The airplane was purchased by and registered to the pilot in March 2018. The pilot held a private pilot certificate with airplane single engine land and airplane instrument ratings. He was operating under the provisions of the FAA BasicMed program.

A pilot's logbook was recovered from the airplane. Review of the logbook indicated that it was at least his second logbook; the first entry was dated October 6, 2015, and carried forward a total time (TT) of about 957 hours. The pilot had logged a TT of about 1,265 hours, including about 1,245 hours in single-engine airplanes. The pilot had logged at least 250 hours in a Cirrus

SR22, and about 30 hours in a Piper PA28-236, prior to his purchase of the Mooney. He had logged a total of about 38 hours in the accident airplane make and model, all of which was in the accident airplane. His logbook indicated that his experience in the accident airplane consisted of about 16 hours of dual instruction, and about 22 hours of pilot in command time. The logbook indicated that he had made 18 trips to PAO in the Cirrus, and 10 trips in the Piper. The accident flight was his fourth flight to PAO in the accident airplane. The logbook indicated that the majority of these trips were for Angel Flight.

PAO was a public airport owned by the city of Palo Alto. It was situated at an elevation of about 7 feet above mean sea level. The single paved runway was designated 13/31, and measured 2,443 by 70 feet. The ATCT was operated and staffed by the FAA and FAA personnel, respectively.

The 1108 PAO automated weather observation included winds from 090° at 7 knots, visibility 7 miles, scattered clouds at 1,300 feet, and an altimeter setting of 29.92 inches of mercury. The temperature at San Carlos Airport (SQL), located about 15 miles north of PAO, was about 19° C, with a dew point of about 15° C.

Aircraft and Owner/Operator Information

Aircraft Make:	Mooney	**Registration:**	N701JM
Model/Series:	M20J No Series	**Aircraft Category:**	Airplane
Amateur Built:	No		
Operator:	On file	**Operating Certificate(s) Held:**	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	**Condition of Light:**	Day
Observation Facility, Elevation:	PAO, 7 ft msl	**Observation Time:**	PDT
Distance from Accident Site:	0 Nautical Miles	**Temperature/Dew Point:**	19°C / 15°C
Lowest Cloud Condition:	Scattered / 1300 ft agl	**Wind Speed/Gusts, Direction:**	7 knots / , 90°
Lowest Ceiling:	None	**Visibility:**	7 Miles
Altimeter Setting:	29.92 inches Hg	**Type of Flight Plan Filed:**	None
Departure Point:	Redding, CA (RDD)	**Destination:**	Palo Alto, CA (PAO)

Wreckage and Impact Information

Crew Injuries:	1 Fatal	**Aircraft Damage:**	Substantial
Passenger Injuries:	1 Serious, 1 Minor	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Fatal, 1 Serious, 1 Minor	**Latitude, Longitude:**	37.458333, -122.108889 (est)

Administrative Information

Investigator In Charge (IIC):	Michael C Huhn
Additional Participating Persons:	Dennis Pearson; FAA; San Jose, CA Robert Collier; Mooney Aircraft Mark Platt; Lycoming Engines; Williamsport, PA
Note:	The NTSB traveled to the scene of this accident.