



Aviation Investigation Final Report

| | | | |
|--------------------------------|---|-------------------------|-------------|
| Location: | Stuart Island, Washington | Accident Number: | SEA05LA141 |
| Date & Time: | July 8, 2005, 11:30 Local | Registration: | N9428G |
| Aircraft: | Cessna 206E | Aircraft Damage: | Substantial |
| Defining Event: | | Injuries: | 1 None |
| Flight Conducted Under: | Part 135: Air taxi & commuter - Non-scheduled | | |

Analysis

Due to the restrictions created by marginal VFR conditions, the pilot entered the pattern on a close-in dogleg to final for a landing to the west. Just as he was starting to turn final, he heard another pilot broadcast that he was departing Stuart Island to the east. The pilot then transmitted, "Aircraft close in, landing to the west, Stuart". He then prepared to execute a go-around. But, as he rounded the corner of the island and rolled out on final, the pilot saw an aircraft pull off of the runway to the grassy area to its south. He therefore decided to continue his approach to a full-stop landing. Upon touchdown on the 2,000 foot runway, the aircraft encountered a significant amount of standing water, and the pilot immediately retracted the flaps in order to get more weight on the wheels for braking. Because of the amount of standing water, the aircraft began to hydroplane, and as it neared the end of the runway, it still had not come to a stop. In an attempt to keep the aircraft from going off the far end of the runway, the pilot intentionally executed a sharp turn to the right. Just after the turn was initiated, the left main gear and the nose gear dug into the soft muddy surface, resulting in the aircraft tipping up on its left side and the left wing contacting the runway surface. During the investigation it was determined that a heavy rain shower had passed through the area about 15 minutes prior to the landing, and that there was still a significant portion of the runway surface that had standing water on it. During a post-accident interview, the pilot stated that he did not realize that there was so much standing water on the runway until after he touched down and it started spraying up on the bottom of the wing and onto the windshield. He further stated that if he had realized that the potential for hydroplaning was so great, he would have slowed his approach speed to compensate for the overly-wet conditions.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot's excessive airspeed on final for the current runway surface conditions, and the intentional obstruction avoidance maneuver he executed when it became clear the aircraft was about to go off the end of the runway. Factors include the pilot's improper decision to land on a surface that he had not first inspected from the air, clouds and rain in the area, and a wet, muddy landing surface.

Findings

Occurrence #1: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

Findings

1. (C) AIRSPEED(VREF) - EXCESSIVE - PILOT IN COMMAND
2. (C) MANEUVER TO AVOID OBSTRUCTIONS - INTENTIONAL - PILOT IN COMMAND
3. AIRCRAFT PERFORMANCE, HYDROPLANING CONDITION
4. (F) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
5. (F) WEATHER CONDITION - CLOUDS
6. (F) WEATHER CONDITION - RAIN
7. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - WATER
8. (F) AIRPORT FACILITIES, RUNWAY/LANDING AREA CONDITION - MUDDY

Factual Information

On July 8, 2005, approximately 1130 Pacific daylight time, the wing of a Cessna 206E, N9428G, impacted the runway during the landing roll at Stuart Island Airstrip (East), Stuart Island, Washington. The airline transport pilot, who was the sole occupant, was not injured, but the aircraft, which is owned and operated by Aeronautical Services, of Friday Harbor, Washington, sustained substantial damage. The 14 CFR Part 135 cargo flight, which departed Eastsound Airport, Orcas Island, Washington, about 10 minutes prior to the accident, was being operated in an area of low clouds, rain, and mist. The aircraft had been on a company VFR flight plan. There was no report of an ELT activation.

According to the pilot, due to the restrictions created by marginal VFR conditions, he entered the pattern on a close-in dogleg to final for a landing to the west. Just as he was starting to turn final, he heard another pilot broadcast that he was departing Stuart Island to the east. The pilot of N9428G therefore transmitted, "Aircraft close in, landing to the west, Stuart". He then prepared to execute a go-around. As he rounded the corner of the island and rolled out on final, the pilot saw an aircraft pull off of the runway to the grassy area to its south. He therefore decided to continue his approach to a full-stop landing. Upon touchdown on the 2,000 foot runway, the aircraft encountered a significant amount of standing water, and the pilot immediately retracted the flaps in order to get more weight on the wheels for braking. Because of the amount of standing water, the aircraft began to hydroplane, and as it neared the end of the runway, it still had not come to a stop. In an attempt to keep the aircraft from going off the far end of the runway, the pilot intentionally executed a sharp turn to the right. Just after the turn was initiated, the left main gear and the nose gear dug into the soft muddy surface, resulting in the aircraft tipping up on its left side and the left wing contacting the runway surface.

During the investigation it was determined that a heavy rain shower had passed through the area about 15 minutes prior to the landing of N9428G, and that there was still a significant portion of the runway surface that had standing water on it. During a post-accident interview, the pilot stated that he did not realize that there was so much standing water on the runway until after he touched down and it started spraying up on the bottom of the wings and onto the windshield. He further stated that if he had realized that the potential for hydroplaning was so great, he would have slowed his approach speed to compensate for the overly-wet conditions.

Pilot Information

| | | | |
|----------------------------------|---|--|------------------|
| Certificate: | Airline transport | Age: | 49, Male |
| Airplane Rating(s): | Single-engine land; Multi-engine land | Seat Occupied: | Left |
| Other Aircraft Rating(s): | Helicopter | Restraint Used: | |
| Instrument Rating(s): | Airplane | Second Pilot Present: | No |
| Instructor Rating(s): | None | Toxicology Performed: | No |
| Medical Certification: | Class 1 With waivers/limitations | Last FAA Medical Exam: | February 1, 2005 |
| Occupational Pilot: | UNK | Last Flight Review or Equivalent: | February 1, 2005 |
| Flight Time: | 11600 hours (Total, all aircraft), 5000 hours (Total, this make and model), 70 hours (Last 90 days, all aircraft), 35 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft) | | |

Aircraft and Owner/Operator Information

| | | | |
|--------------------------------------|--------------------------|---------------------------------------|--------------------------|
| Aircraft Make: | Cessna | Registration: | N9428G |
| Model/Series: | 206E | Aircraft Category: | Airplane |
| Year of Manufacture: | | Amateur Built: | |
| Airworthiness Certificate: | Normal | Serial Number: | 01628 |
| Landing Gear Type: | Tricycle | Seats: | 6 |
| Date/Type of Last Inspection: | March 1, 2005 Annual | 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-F |
| Registered Owner: | Numbers Plus Inc. | Rated Power: | 300 Horsepower |
| Operator: | Aeronautical Services | Operating Certificate(s) Held: | On-demand air taxi (135) |

Meteorological Information and Flight Plan

| | | | |
|---|-------------------------------|---|---------|
| Conditions at Accident Site: | Visual (VMC) | Condition of Light: | Day |
| Observation Facility, Elevation: | | Distance from Accident Site: | |
| Observation Time: | | Direction from Accident Site: | |
| Lowest Cloud Condition: | Scattered / 1000 ft AGL | Visibility | 7 miles |
| Lowest Ceiling: | Broken / 1500 ft AGL | Visibility (RVR): | |
| Wind Speed/Gusts: | / | Turbulence Type Forecast/Actual: | / |
| Wind Direction: | | Turbulence Severity Forecast/Actual: | / |
| Altimeter Setting: | | Temperature/Dew Point: | 16°C |
| Precipitation and Obscuration: | In the vicinity - None - Mist | | |
| Departure Point: | Orcas Island, WA (KORS) | Type of Flight Plan Filed: | None |
| Destination: | Stuart Island, WA (7WA5) | Type of Clearance: | None |
| Departure Time: | 11:20 Local | Type of Airspace: | |

Airport Information

| | | | |
|-----------------------------|--------------------|----------------------------------|-------------|
| Airport: | Stuart Island 7WA5 | Runway Surface Type: | Dirt;Gravel |
| Airport Elevation: | 10 ft msl | Runway Surface Condition: | Wet |
| Runway Used: | 27 | IFR Approach: | None |
| Runway Length/Width: | 2000 ft / 75 ft | VFR Approach/Landing: | Full stop |

Wreckage and Impact Information

| | | | |
|----------------------------|--------|-----------------------------|-----------------------|
| Crew Injuries: | 1 None | Aircraft Damage: | Substantial |
| Passenger Injuries: | | Aircraft Fire: | None |
| Ground Injuries: | N/A | Aircraft Explosion: | None |
| Total Injuries: | 1 None | Latitude, Longitude: | 48.674446,-123.173332 |

Administrative Information

| | |
|--|---|
| Investigator In Charge (IIC): | Anderson, Orrin |
| Additional Participating Persons: | Kevin McKee; FAA/FSDO; Renton, WA |
| Original Publish Date: | October 27, 2005 |
| Last Revision Date: | |
| Investigation Class: | Class |
| Note: | |
| Investigation Docket: | https://data.nts.gov/Docket?ProjectID=62364 |

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant events in other modes of transportation—railroad, transit, highway, marine, pipeline, and commercial space. We determine the probable causes of the accidents and events we investigate, and issue safety recommendations aimed at preventing future occurrences. In addition, we conduct transportation safety research studies and offer information and other assistance to family members and survivors for each accident or event we investigate. We also serve as the appellate authority for enforcement actions involving aviation and mariner certificates issued by the Federal Aviation Administration (FAA) and US Coast Guard, and we adjudicate appeals of civil penalty actions taken by the FAA.

The NTSB does not assign fault or blame for an accident or incident; rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties ... and are not conducted for the purpose of determining the rights or liabilities of any person” (Title 49 *Code of Federal Regulations* section 831.4). Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report (Title 49 *United States Code* section 1154(b)). A factual report that may be admissible under 49 *United States Code* section 1154(b) is available [here](#).