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 started 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.ntsb.gov/Docket?ProjectID=62364