



Aviation Investigation Final Report

Location:	Hawthorne, California	Accident Number:	WPR23LA081
Date & Time:	December 27, 2022, 18:29 Local	Registration:	N16DF
Aircraft:	EMBRAER EXECUTIVE AIRCRAFT INC EMB-505	Aircraft Damage:	Substantial
Defining Event:	Runway excursion	Injuries:	6 None
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot reported that, prior to landing, she obtained weather conditions at the airport, which included calm wind and light rain. After calculating the landing performance, she determined that the destination airport was adequate, and continued the approach to landing. Upon touchdown, she realized that the runway was wetter than anticipated, and applied maximum braking efforts, which included the application of the emergency brake system. Despite the use of maximum braking, the airplane “failed to decelerate at the normal rate.” The pilot initiated a right turn to decelerate, however, the airplane exited the departure end of the runway and impacted approach lighting and the airport perimeter fence, which resulted in substantial damage to the left wing. The pilot reported that there were no preaccident mechanical malfunctions or failures with the airplane that would have precluded normal operation.

The automated weather observation station located on the airport reported that, about 9 minutes before the accident, the wind was from 090° at 3 knots, 7 statute miles visibility and light rain.

Probable Cause and Findings

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

A runway overrun due to the pilot’s failure to stop the airplane as a result of diminished braking action due to a water contaminated runway surface.

Findings

Personnel issues	Aircraft control - Pilot
Aircraft	Surface speed/braking - Attain/maintain not possible
Environmental issues	Rain - Effect on equipment
Environmental issues	Wet surface - Effect on equipment

Factual Information

History of Flight

Landing-landing roll	Runway excursion (Defining event)
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Pilot Information

Certificate:	Airline transport	Age:	35,Female
Airplane Rating(s):	Single-engine land; Single-engine sea; Multi-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	None	Restraint Used:	5-point
Instrument Rating(s):	Airplane	Second Pilot Present:	No
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 1 Without waivers/limitations	Last FAA Medical Exam:	September 2, 2022
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	October 31, 2022
Flight Time:	4315 hours (Total, all aircraft), 3599 hours (Pilot In Command, all aircraft), 26 hours (Last 90 days, all aircraft), 4 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	EMBRAER EXECUTIVE AIRCRAFT INC	Registration:	N16DF
Model/Series:	EMB-505	Aircraft Category:	Airplane
Year of Manufacture:	2013	Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	50500167
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:	August 22, 2022 Continuous airworthiness	Certified Max Gross Wt.:	18387 lbs
Time Since Last Inspection:	60.6 Hrs	Engines:	2 Geared turbofan
Airframe Total Time:	2396.4 Hrs as of last inspection	Engine Manufacturer:	Pratt & Whitney Canada
ELT:	C91A installed, not activated	Engine Model/Series:	PW535E
Registered Owner:		Rated Power:	3478 Lbs thrust
Operator:		Operating Certificate(s) Held:	None

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Night
Observation Facility, Elevation:	KHHR, 54 ft msl	Distance from Accident Site:	1 Nautical Miles
Observation Time:	18:20 Local	Direction from Accident Site:	81°
Lowest Cloud Condition:	Few / 700 ft AGL	Visibility	7 miles
Lowest Ceiling:	Overcast / 2900 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	3 knots /	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	90°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:	29.93 inches Hg	Temperature/Dew Point:	16°C / 13°C
Precipitation and Obscuration:	Light - None - Rain		
Departure Point:	Jackson, WY (JAC)	Type of Flight Plan Filed:	IFR
Destination:	Hawthorne, CA	Type of Clearance:	IFR
Departure Time:	17:20 Local	Type of Airspace:	Class D

Airport Information

Airport:	JACK NORTHROP FLD/HAWTHORNE MUNI HHR	Runway Surface Type:	Asphalt
Airport Elevation:	65 ft msl	Runway Surface Condition:	Wet
Runway Used:	25	IFR Approach:	RNAV
Runway Length/Width:	4884 ft / 100 ft	VFR Approach/Landing:	Full stop

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	Substantial
Passenger Injuries:	5 None	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	6 None	Latitude, Longitude:	33.922548,-118.34365

Administrative Information

Investigator In Charge (IIC):	Cawthra, Joshua		
Additional Participating Persons:	John O'Connor; Federal Aviation Administration; Los Angeles, CA		
Original Publish Date:	April 20, 2023	Investigation Class:	4
Note:	The NTSB did not travel to the scene of this accident.		
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=106530		

The National Transportation Safety Board (NTSB), established in 1967, is an independent federal agency mandated by Congress through the Independent Safety Board Act of 1974 to investigate transportation accidents, determine the probable causes of the accidents, issue safety recommendations, study transportation safety issues, and evaluate the safety effectiveness of government agencies involved in transportation. The NTSB makes public its actions and decisions through accident reports, safety studies, special investigation reports, safety recommendations, and statistical reviews.

The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).