Aviation Investigation Final Report

Location:	Hegins, Pennsylvania	**Accident Number:**	ERA24LA314
Date & Time:	July 19, 2024, 13:08 Local	**Registration:**	N176SA
Aircraft:	Bell OH-58A	**Aircraft Damage:**	Substantial
Defining Event:	Collision with terr/obj (non-CFIT)	**Injuries:**	1 None
Flight Conducted Under:	Part 137: Agricultural		

Analysis

The pilot explained that he flew a perimeter reconnaissance of the fields designated for fungicide application with the helicopter. He identified hazards to flight (wires, houses, terrain features, wind direction, etc.) and then completed applications over ~~3~~ three of the assigned areas before beginning a fourth. As the pilot aligned the helicopter for an application pass and descended to “spray height” he detected a “loosely strung” powerline across his path that sagged to about “4-5 feet above the height of the corn.”

The pilot attempted to climb the helicopter over the wire but was unsuccessful. Immediately after contact with the wire, the pilot experienced a “very rough” vertical vibration and decaying rotor rpm, so he initiated a power-on autorotation for landing.

At touchdown on upsloping terrain, the helicopter pitched forward, the pilot corrected with an aft cyclic input, the helicopter entered a “dynamic rollover” to its right and came to rest on its right side substantially damaged.

The pilot reported that he was uninjured in the accident, and that there were no preimpact mechanical anomalies with the helicopter preventing normal operation.

Probable Cause and Findings

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

The pilot’s inadequate pre-flight and inflight planning which resulted in the helicopter striking a wire hazard during an aerial application flight.

Findings

Environmental issues	Wire - Awareness of condition

Factual Information

History of Flight

Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT) (Defining event)

Pilot Information

Certificate:	Airline transport; Commercial; Flight instructor	**Age:**	43,Male
Airplane Rating(s):	None	**Seat Occupied:**	Right
Other Aircraft Rating(s):	Helicopter	**Restraint Used:**	3-point
Instrument Rating(s):	Helicopter	**Second Pilot Present:**	No
Instructor Rating(s):	Helicopter; Instrument helicopter	**Toxicology Performed:**	
Medical Certification:	Class 2 With waivers/limitations	**Last FAA Medical Exam:**	March 12, 2024
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	January 9, 2024
Flight Time:	(Estimated) 4465 hours (Total, all aircraft), 2330 hours (Total, this make and model), 4369 hours (Pilot In Command, all aircraft), 78 hours (Last 90 days, all aircraft), 24 hours (Last 30 days, all aircraft), 9 hours (Last 24 hours, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Bell	**Registration:**	N176SA
Model/Series:	OH-58A	**Aircraft Category:**	Helicopter
Year of Manufacture:	2011	**Amateur Built:**	
Airworthiness Certificate:	Restricted (Special)	**Serial Number:**	71-20850
Landing Gear Type:	Skid	**Seats:**	4
Date/Type of Last Inspection:	100 hour	**Certified Max Gross Wt.:**	3200 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo shaft
Airframe Total Time:	6914 Hrs at time of accident	**Engine Manufacturer:**	ROLLS-ROYC
ELT:	Not installed	**Engine Model/Series:**	T63-A-720
Registered Owner:	On file	**Rated Power:**	400 Horsepower
Operator:	On file	**Operating Certificate(s) Held:**	Agricultural aircraft (137)

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KMUI,488 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	12:55 Local	**Direction from Accident Site:**	
Lowest Cloud Condition:	Scattered / 5000 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	None	**Visibility (RVR):**	
Wind Speed/Gusts:	5 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	260°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	30.13 inches Hg	**Temperature/Dew Point:**	27°C / 11°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Red Lion, PA	**Type of Flight Plan Filed:**	None
Destination:	Hegins, PA	**Type of Clearance:**	None
Departure Time:	07:30 Local	**Type of Airspace:**	Class G

Wreckage and Impact Information

Crew Injuries:	1 None	**Aircraft Damage:**	Substantial
Passenger Injuries:	N/A	**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 None	**Latitude, Longitude:**	40.66519,-76.48335(est)

Preventing Similar Accidents

Preventing Obstacle Collisions in Agricultural Operations (SA-035)

The Problem

Accidents involving collisions with obstacles, including poles, wires, guy wires, meteorological evaluation towers (MET), or trees, are among the most common types of agricultural aircraft accidents. Some collisions involved obstacles that the pilots did not see (even during survey flights) but others involved obstacles that were known to the pilot and/or had characteristics that would make them visibly conspicuous.

What can you do?

- Maintain a quick-reference document (paper or electronic) at the operations base that contains field maps, charts, photographs, and details of all known obstacles.Frequently review current aeronautical charts for information about obstacles.
- Before you leave the ground, spend time becoming familiar with all available information about the target field and programming navigation equipment. Such preflight action can help reduce the potential for confusion or distraction in flight.
- Conduct aerial surveys of the target field but do not rely solely on an aerial survey to identify potential obstacles.
- Conduct regular ground surveys of fields. Some towers can be erected in hours, and obstacles can change since you last worked that field.
- When possible, use ground crews. They may be in a better position to see certain obstacles and help you ensure that your aircraft remains clear of them.
- Watch for shadows and irregularities in growth patterns to help identify obstacles.
- Speak with farmers and land owners to raise awareness about obstacle hazards.
- Use GPS and other technology to maintain awareness of obstacle locations.
- Be aware that workload, fatigue, sun glare, and distractions in the cockpit can adversely affect your ability to see, avoid, or remember obstacles.
- Understand the performance limitations and requirements for your aircraft, particularly when operating with heavier loads and at higher density altitudes.
- The National Agricultural Aviation Association's Professional Aerial Applicators' Support System reminds pilots that, when ferrying an aircraft or transitioning between sites, flying above 500 feet reduces obstacle collision risks: "Ferry Above Five and Stay Alive."

See https://www.ntsb.gov/Advocacy/safety-alerts/Documents/SA-035.pdf for additional resources.

The NTSB presents this information to prevent recurrence of similar accidents. Note that this should not be considered guidance from the regulator, nor does this supersede existing FAA Regulations (FARs).

Administrative Information

Investigator In Charge (IIC):	Rayner, Brian
Additional Participating Persons:	James Williams; FAA/FSDO; Harrisburg, PA
Original Publish Date:	March 20, 2025
Last Revision Date:	
Investigation Class:	Class 4
Note:	The NTSB did not travel to the scene of this accident.
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=194739