



# Aviation Investigation Final Report

<b>Location:</b>	South Kingstown, Rhode Island	<b>Accident Number:</b>	ERA24LA171
<b>Date &amp; Time:</b>	April 9, 2024, 08:30 Local	<b>Registration:</b>	N331EL
<b>Aircraft:</b>	ROBINSON HELICOPTER COMPANY R44 II	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>	Low altitude operation/event	<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Other work use		

## Analysis

The pilot was practicing various flight profiles over a pond in his helicopter. After completing the first profile, he began a profile that included a normal takeoff, a 10-ft hover, an acceleration to 40 kts, a climb to 50 ft above ground level, then a return to a 10-ft hover. On the pilot's second attempt at this maneuver, when decelerating and descending back down to a 10 ft hover, the helicopter descended too low. The front skids caught the water and the helicopter descended into the pond, substantially damaging the tail rotor assembly and the main rotor blades. The pilot reported that there were no preimpact mechanical malfunctions or failures of the helicopter that would have precluded normal operation. He also described that the weather and water conditions at the time of the accident were "calm and clear with no wind ripples on the water surface," and that this produced a "mirroring effect" that hindered his depth perception.

## Probable Cause and Findings

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

The pilot's failure to maintain clearance from the water while maneuvering at low altitude.

## Findings

<b>Aircraft</b>	Altitude - Not attained/maintained
<b>Environmental issues</b>	Water - Effect on personnel
<b>Personnel issues</b>	Visual illusion/disorientation - Pilot

## Factual Information

### History of Flight

<b>Maneuvering-low-alt flying</b>	Low altitude operation/event (Defining event)
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### Pilot Information

<b>Certificate:</b>	Commercial	<b>Age:</b>	54,Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Right
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	3-point
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	Helicopter	<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>	Class 2 With waivers/limitations	<b>Last FAA Medical Exam:</b>	June 29, 2023
<b>Occupational Pilot:</b>	Yes	<b>Last Flight Review or Equivalent:</b>	October 10, 2023
<b>Flight Time:</b>	12050 hours (Total, all aircraft), 7550 hours (Total, this make and model), 11850 hours (Pilot In Command, all aircraft), 39 hours (Last 90 days, all aircraft), 19 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

### Passenger Information

<b>Certificate:</b>		<b>Age:</b>	
<b>Airplane Rating(s):</b>		<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>		<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>		<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>		<b>Toxicology Performed:</b>	
<b>Medical Certification:</b>		<b>Last FAA Medical Exam:</b>	
<b>Occupational Pilot:</b>	No	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>			

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	ROBINSON HELICOPTER COMPANY	<b>Registration:</b>	N331EL
<b>Model/Series:</b>	R44 II	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>	2023	<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	14667
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	Continuous airworthiness	<b>Certified Max Gross Wt.:</b>	2500 lbs
<b>Time Since Last Inspection:</b>	50 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	50 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	C126 installed, activated, aided in locating accident	<b>Engine Model/Series:</b>	IO-540-AE1A5
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	245
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	WST,65 ft msl	<b>Distance from Accident Site:</b>	12 Nautical Miles
<b>Observation Time:</b>	08:53 Local	<b>Direction from Accident Site:</b>	244°
<b>Lowest Cloud Condition:</b>	Clear	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	4 knots /	<b>Turbulence Type Forecast/Actual:</b>	None / None
<b>Wind Direction:</b>	340°	<b>Turbulence Severity Forecast/Actual:</b>	N/A / N/A
<b>Altimeter Setting:</b>	30.03 inches Hg	<b>Temperature/Dew Point:</b>	16°C / -1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	North Kingstown, RI (OQU)	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	North Kingstown, RI (OQU)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	08:10 Local	<b>Type of Airspace:</b>	Class G

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>		<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	41.437414,-71.572543(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Boggs, Daniel
<b>Additional Participating Persons:</b>	Philip Kingston; FAA/FSDO; Burlington, MA
<b>Original Publish Date:</b>	May 29, 2024
<b>Last Revision Date:</b>	June 25, 2024
<b>Investigation Class:</b>	<a href="#">Class 4</a>
<b>Note:</b>	The NTSB did not travel to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=194061">https://data.nts.gov/Docket?ProjectID=194061</a>

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](#).