



Aviation Investigation Final Report

Location:	Azusa, California	Accident Number:	WPR22LA125
Date & Time:	March 19, 2022, 17:04 Local	Registration:	N950SG
Aircraft:	Eurocopter AS332L1	Aircraft Damage:	Substantial
Defining Event:	Loss of visual reference	Injuries:	4 Serious, 2 Minor
Flight Conducted Under:	Part 91: General aviation - Other work use		

Analysis

The pilot of the helicopter stated that, while maneuvering around the area looking for a suitable landing site, a dirt turnout alongside a road was selected. A tree was noted on the edge of the turnout. An approach was initiated to the site and expected brownout was encountered. About 5 ft above ground, the pilot heard the crewmember in the back of the helicopter call out “hold.” The pilot arrested the descent and came to a hover. Within seconds the asphalt roadway reference was obscured by the brownout and he lost visual reference. He announced, “lost visual” and started to climb, which was his last recollection before regaining consciousness.

The crewmember in the back of the helicopter reported that the helicopter approached the landing zone angled, to the south toward a tree. About 7 to 10 ft above the ground, he noticed that the helicopter was drifting forward, and he called out twice, “You are drifting forward, hold.” The helicopter continued to drift and subsequently, struck a tree and rolled onto its left side. The helicopter sustained substantial damage to the fuselage and main rotor system.

The pilot reported there were no mechanical malfunctions or failures with the helicopter that would have precluded normal operation.

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 a tree after encountering brownout conditions and a loss of visual reference during the approach to land.

Findings

Personnel issues	Monitoring environment - Pilot
Personnel issues	Aircraft control - Pilot
Personnel issues	Situational awareness - Pilot
Environmental issues	Tree(s) - Effect on operation

Factual Information

History of Flight

Maneuvering-hover	Loss of visual reference (Defining event)
Maneuvering-hover	Attempted remediation/recovery
Maneuvering-low-alt flying	Collision with terr/obj (non-CFIT)

Pilot Information

Certificate:	Airline transport	Age:	50, Male
Airplane Rating(s):	None	Seat Occupied:	Right
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 With waivers/limitations	Last FAA Medical Exam:	September 22, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	July 9, 2021
Flight Time:	5382 hours (Total, all aircraft), 1243 hours (Total, this make and model), 4691 hours (Pilot In Command, all aircraft), 88 hours (Last 90 days, all aircraft), 16 hours (Last 30 days, all aircraft), 4 hours (Last 24 hours, all aircraft)		

Pilot Information

Certificate:	Commercial	Age:	46, Male
Airplane Rating(s):	Single-engine land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	4-point
Instrument Rating(s):	Helicopter	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:	Class 2 Without waivers/limitations	Last FAA Medical Exam:	September 8, 2021
Occupational Pilot:	Yes	Last Flight Review or Equivalent:	January 26, 2022
Flight Time:	2686 hours (Total, all aircraft), 297.2 hours (Total, this make and model), 2235.1 hours (Pilot In Command, all aircraft), 72.4 hours (Last 90 days, all aircraft), 32 hours (Last 30 days, all aircraft), 0 hours (Last 24 hours, all aircraft)		

Other flight crew Information

Certificate:	None	Age:	Male
Airplane Rating(s):	None	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	Male
Airplane Rating(s):		Seat Occupied:	Rear
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Passenger Information

Certificate:		Age:	
Airplane Rating(s):		Seat Occupied:	Rear
Other Aircraft Rating(s):		Restraint Used:	4-point
Instrument Rating(s):		Second Pilot Present:	
Instructor Rating(s):		Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Other flight crew Information

Certificate:	None	Age:	
Airplane Rating(s):	None	Seat Occupied:	Rear
Other Aircraft Rating(s):	None	Restraint Used:	4-point
Instrument Rating(s):	None	Second Pilot Present:	
Instructor Rating(s):	None	Toxicology Performed:	
Medical Certification:		Last FAA Medical Exam:	
Occupational Pilot:	No	Last Flight Review or Equivalent:	
Flight Time:			

Aircraft and Owner/Operator Information

Aircraft Make:	Eurocopter	Registration:	N950SG
Model/Series:	AS332L1	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:	Normal	Serial Number:	9007
Landing Gear Type:	Retractable - Tricycle	Seats:	8
Date/Type of Last Inspection:		Certified Max Gross Wt.:	18960 lbs
Time Since Last Inspection:		Engines:	2 Turbo shaft
Airframe Total Time:		Engine Manufacturer:	Safran
ELT:	Installed	Engine Model/Series:	Makila 1A1
Registered Owner:	COUNTY OF LOS ANGELES	Rated Power:	1877
Operator:	COUNTY OF LOS ANGELES	Operating Certificate(s) Held:	None

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:		Visibility	10 miles
Lowest Ceiling:	Broken / 12000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	12 knots / None	Turbulence Type Forecast/Actual:	None / None
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	N/A / N/A
Altimeter Setting:		Temperature/Dew Point:	
Precipitation and Obscuration:			
Departure Point:	Long Beach, CA (LGB)	Type of Flight Plan Filed:	None
Destination:	Yermo, CA	Type of Clearance:	None
Departure Time:		Type of Airspace:	Class G

Wreckage and Impact Information

Crew Injuries:	3 Serious, 1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	1 Serious, 1 Minor	Aircraft Fire:	None
Ground Injuries:		Aircraft Explosion:	None
Total Injuries:	4 Serious, 2 Minor	Latitude, Longitude:	34.176519,-117.88304(est)

Administrative Information

Investigator In Charge (IIC): Salazar, Fabian

Additional Participating Persons:

Original Publish Date: September 8, 2022

Last Revision Date:

Investigation Class: [Class 4](#)

Note: The NTSB did not travel to the scene of this accident.

Investigation Docket: <https://data.nts.gov/Docket?ProjectID=104802>

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](#).