# Aviation Investigation Final Report

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| **Location:** | Salinas, California | **Accident Number:** | WPR17LA206 |
| **Date & Time:** | September 17, 2017, 07:00 Local | **Registration:** | N3285T |
| **Aircraft:** | Bell 47G 5 | **Aircraft Damage:** | Substantial |
| **Defining Event:** | Controlled flight into terr/obj (CFIT) | **Injuries:** | 1 Minor |
| **Flight Conducted Under:** | Part 137: Agricultural | | |

## Analysis

The pilot was flying under a powerline during an aerial application flight in an area with which he was very familiar when the helicopter collided with a wire. The wire was installed at a height of about 20 ft on the 40-ft-tall poles and was used for attaching a larger cable data line, which had not yet been installed at the time of the accident. The pilot did not recall seeing the wire before the accident.

Examination of the wreckage revealed that the helicopter impacted the wire at its main rotor mast. The main rotor mast separated from the wreckage and the main rotor blades displayed impact damage consistent with ground impact. Examination revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation of the helicopter.

## Probable Cause and Findings

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

The pilot's inadequate visual lookout, which resulted in an in-flight collision with a wire.

### Findings

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| **Personnel issues** | Monitoring environment - Pilot |
| **Environmental issues** | Wire - Contributed to outcome |

# Factual Information

## History of Flight

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| **Maneuvering** | Controlled flight into terr/obj (CFIT) (Defining event) |

On September 17, 2017, about 0700 Pacific daylight time, a Bell 47G-5 helicopter, N3285T, was substantially damaged when it was involved in an accident near Salinas, California. The pilot received minor injuries. The helicopter was operated as a Title 14 *Code of Federal Regulations* Part 137 aerial application flight.

According to the pilot, the accident occurred during his first application pass on the second field of the day. After loading the helicopter with chemicals near the field, he departed and flew around a large power transmission line tower to the east of the field. He planned to fly the first pass from the northeast side and spray the middle of the field to the southwest. He remembered looking for vehicle traffic along the edge of the field before crossing under the smaller power lines supported by 40-ft power poles that ran parallel to the road when the helicopter impacted a wire and, subsequently, terrain. (see Figure 1). The pilot did not recall seeing the wire on the 40-ft power poles before the accident. He further reported that he had been spraying this field for the previous 20 years, and that the weather was not an issue on the morning of the accident.


**Figure 1-Accident site and approximate flight path.**

Examination of the helicopter by a Federal Aviation Administration inspector revealed that the main rotor assembly was separated from the helicopter and the main rotor blades exhibited impact damage. Remnants of wire were found wrapped around the main rotor drive shaft. (see Figure 2). The examination of the wreckage revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.


**Figure 2-Accident site.**

The large power transmission line towers extended from the southwest to the northeast and paralleled the southeast edge of the field. The 40-ft poles supported power, telephone, and cable lines, and were oriented southeast to a northwest and parallel to the northeast edge of the field. A wire was installed at a height of about 20 ft up the 40-ft poles for attaching a larger cable data line, which had not yet been installed on that section of wire at the time of the accident.

## Pilot Information

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| **Certificate:** | Commercial | **Age:** | 70,Male |
| **Airplane Rating(s):** | Single-engine land | **Seat Occupied:** | Right |
| **Other Aircraft Rating(s):** | Helicopter | **Restraint Used:** | 3-point |
| **Instrument Rating(s):** | Airplane; Helicopter | **Second Pilot Present:** | No |
| **Instructor Rating(s):** | None | **Toxicology Performed:** | No |
| **Medical Certification:** | Class 2 None | **Last FAA Medical Exam:** | August 31, 2017 |
| **Occupational Pilot:** | Yes | **Last Flight Review or Equivalent:** | |
| **Flight Time:** | | | |

## Aircraft and Owner/Operator Information

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| **Aircraft Make:** | Bell | **Registration:** | N3285T |
| **Model/Series:** | 47G 5 NO SERIES | **Aircraft Category:** | Helicopter |
| **Year of Manufacture:** | 1969 | **Amateur Built:** | |
| **Airworthiness Certificate:** | Normal | **Serial Number:** | 7964 |
| **Landing Gear Type:** | Ski | **Seats:** | 1 |
| **Date/Type of Last Inspection:** | Unknown | **Certified Max Gross Wt.:** | |
| **Time Since Last Inspection:** | | **Engines:** | 1 Reciprocating |
| **Airframe Total Time:** | | **Engine Manufacturer:** | LYCOMING |
| **ELT:** | Installed | **Engine Model/Series:** | VO-435 SERIES |
| **Registered Owner:** | On file | **Rated Power:** | 260 Horsepower |
| **Operator:** | On file | **Operating Certificate(s) Held:** | Agricultural aircraft (137) |

## Meteorological Information and Flight Plan

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| **Conditions at Accident Site:** | Visual (VMC) | **Condition of Light:** | Day |
| **Observation Facility, Elevation:** | KSNS,74 ft msl | **Distance from Accident Site:** | 5 Nautical Miles |
| **Observation Time:** | 13:53 Local | **Direction from Accident Site:** | 92° |
| **Lowest Cloud Condition:** | | **Visibility** | 9 miles |
| **Lowest Ceiling:** | Overcast / 900 ft AGL | **Visibility (RVR):** | |
| **Wind Speed/Gusts:** | 3 knots / | **Turbulence Type Forecast/Actual:** | None / None |
| **Wind Direction:** | 180° | **Turbulence Severity Forecast/Actual:** | Unknown / N/A |
| **Altimeter Setting:** | 29.95 inches Hg | **Temperature/Dew Point:** | 14°C / 13°C |
| **Precipitation and Obscuration:** | No Obscuration; No Precipitation | | |
| **Departure Point:** | Salinas, CA | **Type of Flight Plan Filed:** | VFR |
| **Destination:** | Salinas, CA | **Type of Clearance:** | None |
| **Departure Time:** | 06:50 Local | **Type of Airspace:** | Class G |

## Airport Information

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| **Airport:** | SALINAS MUNI SNS | **Runway Surface Type:** | |
| **Airport Elevation:** | 84 ft msl | **Runway Surface Condition:** | |
| **Runway Used:** | | **IFR Approach:** | None |
| **Runway Length/Width:** | | **VFR Approach/Landing:** | None |

## Wreckage and Impact Information

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| **Crew Injuries:** | 1 Minor | **Aircraft Damage:** | Substantial |
| **Passenger Injuries:** | | **Aircraft Fire:** | None |
| **Ground Injuries:** | | **Aircraft Explosion:** | None |
| **Total Injuries:** | 1 Minor | **Latitude, Longitude:** | 36.666942,-121.70444(est) |

## Administrative Information

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| **Investigator In Charge (IIC):** | Swick, Andrew |
| **Additional Participating Persons:** | Michael Schaadt; FAA-FSDO; San Jose, CA |
| **Original Publish Date:** | May 5, 2021 |
| **Last Revision Date:** | |
| **Investigation Class:** | Class 3 |
| **Note:** | The NTSB did not travel to the scene of this accident. |
| **Investigation Docket:** | https://data.ntsb.gov/Docket?ProjectID=96029 |