



# Aviation Investigation Final Report

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<b>Location:</b>	Beaver Island, Michigan	<b>Accident Number:</b>	CHI01LA266
<b>Date &amp; Time:</b>	August 5, 2001, 13:15 Local	<b>Registration:</b>	N4545T
<b>Aircraft:</b>	Grumman AA-5B	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

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## Analysis

The airplane traveled off the departure end of the runway and into a sand/gravel pit on landing. The landing was being made on runway 35 (3,500 feet by 140 feet, dry grass). A typed statement provided by the pilot with his NTSB form 6120.1/2 stated that because of trees at the end of the runway, the pilot made a higher than normal approach and sustained engine power until the trees were cleared. He reported the airplane touched down 500 feet beyond approach end of the runway. The pilot reported that during the landing roll he applied additional braking when he realized that the runway had a down slope. He reported, "While I am sure there was a moment that I could have aborted the landing, it passed due to my confidence that directional control and braking was sufficient to achieve this landing." The airplane continued off the departure end of the runway into a sand/gravel pit, which is 8 to 10 feet below the runway elevation. The right wing contacted a sand pile and the airplane rotated 20 degrees to the right prior to coming to rest. There are 60-foot tall trees located 10 feet from the approach end of runway 35. Runway 35 has a 1,350 foot displaced threshold.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The pilot misjudged the approach and landing, and his failure to abort the landing. Factors associated with the accident were the trees at the approach end of the runway and the sand/gravel pit that the airplane traveled into.

## Findings

Occurrence #1: OVERRUN

Phase of Operation: LANDING - ROLL

### Findings

1. (F) OBJECT - TREE(S)
2. (C) PLANNED APPROACH - MISJUDGED - PILOT IN COMMAND
3. (C) ABORTED LANDING - NOT PERFORMED - PILOT IN COMMAND

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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER

Phase of Operation: LANDING - ROLL

### Findings

4. (F) TERRAIN CONDITION - LOOSE GRAVEL/SANDY

## Factual Information

On August 5, 2001, at 1315 eastern daylight time, a Grumman AA-5B, N4545T, collided with the terrain after over running the end of runway 35 (3,500 feet by 140 feet, dry grass) while landing at the Welke Airport, Beaver Island, Michigan. The private pilot and passenger were not injured. The airplane was substantially damaged. The 14 CFR Part 91 personal flight was operating in visual meteorological conditions and a VFR flight plan was filed. The flight originated from Harbor Springs, Michigan at 1230.

The pilot included a typed statement with the NTSB form 6120.1/2 that he submitted. The statement reported that the pilot reported that he checked the weather prior to the flight and the winds in the general area of Beaver Island were from 270 degrees at 3 to 7 knots. He reported that they initially intended to land on runway 27 at the Beaver Island Airport. However, once arriving in the area, he decided to land at the Welke Airport, which was closer to the main town on the island. The pilot reported he flew over the Welke Airport and confirmed that the windsock was indicating that the wind was perpendicular to runway 35.

The pilot reported, "On the turn to final it was observed that a stand of trees existed to the south of the field that required a higher than normal angle of approach to the runway." The pilot reported he used a slight crab to the left and "the power setting was sustained until the aircraft was clear of the treeline." He reported he closed the throttle after clearing the trees and the airplane touched down "500 feet beyond the south-most (entry) end of the runway." The pilot reported he maintained an airspeed that was 5 knots higher than normal due to the crosswind.

The pilot reported that during the landing roll he applied additional braking when he realized that the runway had a down slope. The pilot reported, "While I am sure there was a moment that I could have aborted the landing, it passed due to my confidence that directional control and braking was sufficient to achieve this landing." The airplane continued off the departure end of the runway into a sand/gravel pit, which is 8 to 10 feet below the runway elevation. The right wing contacted a sand pile and the airplane rotated 20 degrees to the right prior to coming to rest.

According to the 2001 Michigan Airport Directory and AirNav.com, there are 60-foot tall trees located 10 feet from the approach end of runway 35. Runway 35 has a 1,350 foot displaced threshold.

Winds reported at the Charlevoix Airport (26 miles southeast of the Welke Airport) at 1315, were from 240 degrees at 6 knots.

## Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	48, Male
<b>Airplane Rating(s):</b>	Single-engine land	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	April 25, 2001
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	
<b>Flight Time:</b>	462 hours (Total, all aircraft), 90 hours (Total, this make and model), 390 hours (Pilot In Command, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Grumman	<b>Registration:</b>	N4545T
<b>Model/Series:</b>	AA-5B	<b>Aircraft Category:</b>	Airplane
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	AA5B1268
<b>Landing Gear Type:</b>	Tricycle	<b>Seats:</b>	4
<b>Date/Type of Last Inspection:</b>	November 20, 2000 Annual	<b>Certified Max Gross Wt.:</b>	2400 lbs
<b>Time Since Last Inspection:</b>	80 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	2813 Hrs	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Installed, not activated	<b>Engine Model/Series:</b>	O-360
<b>Registered Owner:</b>	William P. Sheridan	<b>Rated Power:</b>	180 Horsepower
<b>Operator:</b>		<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>	CVX,670 ft msl	<b>Distance from Accident Site:</b>	26 Nautical Miles
<b>Observation Time:</b>	14:15 Local	<b>Direction from Accident Site:</b>	150°
<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>	6 knots /	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	240°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.12 inches Hg	<b>Temperature/Dew Point:</b>	33°C / 13°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	Harbor Springs, MI (D87)	<b>Type of Flight Plan Filed:</b>	VFR
<b>Destination:</b>	Beaver Island, MI (6Y8)	<b>Type of Clearance:</b>	None
<b>Departure Time:</b>	12:30 Local	<b>Type of Airspace:</b>	Class E

## Airport Information

<b>Airport:</b>	Welke 6Y8	<b>Runway Surface Type:</b>	Grass/turf
<b>Airport Elevation:</b>	664 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	35	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	3500 ft / 140 ft	<b>VFR Approach/Landing:</b>	Full stop;Traffic pattern

## 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>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	45.649394,-85.549751(est)

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Sullivan, Pamela
<b>Additional Participating Persons:</b>	Frank S Schaefer; FAA - Grand Rapids FSDO; Grand Rapids, MI
<b>Original Publish Date:</b>	June 3, 2002
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	The NTSB traveled to the scene of this accident.
<b>Investigation Docket:</b>	<a href="https://data.ntsb.gov/Docket?ProjectID=52976">https://data.ntsb.gov/Docket?ProjectID=52976</a>

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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](#).