



Aviation Investigation Final Report

Location:	NAPA, California	Accident Number:	LAX90LA279
Date & Time:	August 7, 1990, 07:46 Local	Registration:	N9023Z
Aircraft:	Balloon Works Firefly 8	Aircraft Damage:	None
Defining Event:		Injuries:	1 Serious, 1 Minor, 5 None
Flight Conducted Under:	Part 91: General aviation		

Analysis

SEVENTEEN BALLOONS LAUNCHED FROM VARIOUS LOCATIONS AROUND THE NAPA VALLEY FOR LOCAL SIGHTSEEING FLIGHTS. STATEMENTS FROM PILOTS, PASSENGERS AND GROUND WITNESSES SAID THAT WHILE THE BALLOONS WERE IN NORMAL DRIFTING FLIGHT A MICROBURST LIKE CONDITION SUDDENLY OCCURRED WHICH AFFECTED ALL OF THE BALLOONS. THE WEATHER PHENOMONA ENCOUNTERED INCLUDED STRONG GUSTING SURFACE AND ALOFT WINDS IN ADDITION TO SEVERE DOWN DRAFTS. THE BALLOONS WERE RAPIDLY FORCED TOWARD THE GROUND AS THEIR GROUND SPEED INCREASED RADICALLY. THE PILOTS OF SEVERAL BALLOONS REPORTED THAT THE SHAPES OF THEIR BALLOON ENVELOPES WERE SEVERELY DISTORTED BY THE SUDDEN MOVEMENT OF THE AIRMASS. EIGHT OF THE 17 BALLOONS ATTEMPTED FORCED LANDINGS. FOUR OF THE BALLOONS SUCCESSFULLY LANDED. THE OTHER FOUR BALLOONS COLLIDED WITH OBSTRUCTIONS AND THE GROUND DURING THE ATTEMPTED LANDINGS. AT THE TIME OF THE INCIDENT, A LARGE THUNDERSTORM WAS REPORTED 30 MILES TO THE NORTH.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: THE FLIGHT'S ENCOUNTER WITH A PROBABLE MICROBURST WEATHER PHENOMENA WITH DOWN DRAFTS AND WINDS BEYOND THE PERFORMANCE CAPABILITY OF THE BALLOON.

Findings

Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: CRUISE

Findings

1. (C) WEATHER CONDITION - MICROBURST/DRY

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER

Phase of Operation: DESCENT - UNCONTROLLED

Findings

2. (C) AIRCRAFT PERFORMANCE, CLIMB CAPABILITY - EXCEEDED

3. (F) TERRAIN CONDITION - HIGH OBSTRUCTION(S)

Factual Information

Pilot Information

Certificate:	Commercial	Age:	31,Female
Airplane Rating(s):	None	Seat Occupied:	Unknown
Other Aircraft Rating(s):	Balloon	Restraint Used:	
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):		Toxicology Performed:	No
Medical Certification:	None None	Last FAA Medical Exam:	
Occupational Pilot:	UNK	Last Flight Review or Equivalent:	
Flight Time:	210 hours (Total, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Balloon Works	Registration:	N9023Z
Model/Series:	Firefly 8 FIREFLY 8	Aircraft Category:	Balloon
Year of Manufacture:		Amateur Built:	
Airworthiness Certificate:		Serial Number:	F8-350
Landing Gear Type:	Retractable - Tricycle	Seats:	
Date/Type of Last Inspection:	Unknown	Certified Max Gross Wt.:	2450 lbs
Time Since Last Inspection:	0 Hrs	Engines:	Unknown
Airframe Total Time:		Engine Manufacturer:	
ELT:	Not installed	Engine Model/Series:	
Registered Owner:	NAPA VALLEY BALLOONS, INC.	Rated Power:	
Operator:		Operating Certificate(s) Held:	None
Operator Does Business As:		Operator Designator Code:	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	Condition of Light:	Day
Observation Facility, Elevation:	APC	Distance from Accident Site:	
Observation Time:	07:45 Local	Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Visibility	30 miles
Lowest Ceiling:	Overcast / 30000 ft AGL	Visibility (RVR):	
Wind Speed/Gusts:	20 knots / 30 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	180°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29 inches Hg	Temperature/Dew Point:	21°C / 14°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	(NONE)	Type of Flight Plan Filed:	None
Destination:	(NONE)	Type of Clearance:	None
Departure Time:	07:00 Local	Type of Airspace:	

Airport Information

Airport:		Runway Surface Type:	
Airport Elevation:	0 ft msl	Runway Surface Condition:	
Runway Used:	0	IFR Approach:	None
Runway Length/Width:	0 ft / 0 ft	VFR Approach/Landing:	None

Wreckage and Impact Information

Crew Injuries:	1 None	Aircraft Damage:	None
Passenger Injuries:	1 Serious, 1 Minor, 4 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	1 Serious, 1 Minor, 5 None	Latitude, Longitude:	38.549114,-122.150619(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	DAVID SMITH; SACRAMENTO, CA
Original Publish Date:	November 9, 1992
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.nts.gov/Docket?ProjectID=26886

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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](#).