Aviation Investigation Final Report

Location:	Salt Lake City, Utah	**Accident Number:**	WPR22LA251
Date & Time:	July 13, 2022, 18:52 Local	**Registration:**	N877FE
Aircraft:	Cessna 208B	**Aircraft Damage:**	Substantial
Defining Event:	Windshear or thunderstorm	**Injuries:**	1 Minor
Flight Conducted Under:	Part 135: Air taxi & commuter - Non-scheduled		

Analysis

The pilot of the cargo flight was aware of thunderstorms west of the destination airport, but he did not use onboard radar during the flight to track the progress of the thunderstorms. Shortly after the pilot checked in on the airport's air traffic control (ATC) frequency, the controller made a transmission to all aircraft on the frequency to expect light-to-moderate precipitation when abeam the airport. The controller then made another transmission to all aircraft on the frequency about a pilot report (PIREP) regarding a windshear gain of 20 knots on an 8- to 9-mile final approach.

The airplane was cleared for a visual approach, and the pilot was instructed to follow and land after a Boeing 757. The pilot reported that he encountered a left quartering headwind while on final approach. The pilot also reported that while the airplane was in the landing flare, the tower reported that the Boeing 757 had encountered windshear while landing. Shortly thereafter, the airplane, while still airborne, started drifting sideways across the runway. The pilot then initiated a go-around because he was unable to maintain directional control of the airplane due to the wind.

After adding power and climbing to about 30 ft above ground level (agl), the pilot lowered the left wing to stop the airplane from drifting off the runway centerline. He encountered a "downdraft" that caused the airplane to descend and impact terrain, resulting in substantial damage to the wings and fuselage.

Thunderstorms were forecast for the airport in several different weather forecast products, to include terminal aerodrome forecast (TAF), graphical forecast for aviation (GFA), and a convective Significant Meteorological Information (SIGMET). A convective SIGMET was issued after the pilot had departed and was valid for the accident site. The convective SIGMET forecast an area of thunderstorms with little movement and with cloud tops above flight level 450. A convective SIGMET implies the potential for wind shear, lightning, severe turbulence, among other things. This aviation forecast information was consistent with the weather conditions that the accident flight encountered.

Upper air weather information for the destination airport about the time of the accident indicated an unstable environment from the surface to 25,000 ft. The Automated Surface Observing System (ASOS) located about 5,000 ft south-southeast of the accident site, about 2 minutes after the accident, reported the windspeed was 29 knots gusting to 48 knots with thunderstorms and light rain. Video imagery a few minutes before and through the time of the accident revealed that virga was descending toward the airport with gusting winds and rain. Microbursts can be found in and beneath convective clouds and can be embedded in heavy rain or virga.Video showed that a microburst encountered the ground about 2 minutes before the airplane landed with gusting surface winds and associated rainfall moving toward the landing runway. The National Weather Service issued three airport weather warnings that were valid at the time of the accident. The first warning was for outflow wind gusts of 30 mph/26 knots or greater. The second and third warnings were for lightning within 5 miles of the airport. Although the pilot was en route to the destination airport when these warnings were issued and would thus not have known about them, the pilot could have had better situational awareness of convective activity along and near the route of flight if he had operated the airplane's onboard weather radar.

The investigation determined that ATC tower at the airport used only the center field/airport wind sensor information for wind information (to be distributed to pilots) and runway configuration. About the time of the accident, the wind sensor that SLC ATC tower used reported a wind gust of 16 knots, whereas the airport's ASOS was reporting wind between 25 and 29 knots with gusts to 48 knots. The ATC tower wind sensor did not report a wind gust above 25 knots near the accident time, and neither of the airport's windshear display systems indicated a microburst alert until about 10 minutes after the accident. The circumstances of this accident showed that dangerous weather conditions can impact arriving and departing aircraft operating on the southern part of the airport.

Additional wind sensors, if properly positioned on and around the airport and runways, could have identified the microburst activity in enough time for the controller to have provided the information to the pilot before the attempted landing. Wind information from only one sensor would not allow the comparison of wind from other sensors and provide information from the departure and approach ends of the runways.

Probable Cause and Findings

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

The pilot’s inability to maintain control of the airplane when it encountered a microburst during a landing attempt and a go-around near known thunderstorm activity. Contributing to the accident was an inadequate amount of wind sensors and wind shear detection equipment used by the ATC tower to detect microburst activity at the airport.

Findings

Environmental issues	Microburst - Effect on equipment
Environmental issues	Ground support/equipment - Contributed to outcome
Environmental issues	Ground support/equipment - Awareness of condition

Factual Information

History of Flight

Landing-aborted after touchdown	Windshear or thunderstorm (Defining event)

On July 13, 2022, about 1852 mountain daylight time, a Cessna 208B airplane, N877FE, was substantially damaged when it was involved in an accident at Salt Lake City International Airport (SLC), Salt Lake City, Utah. The pilot sustained minor injuries. The airplane was operated as a Title 14 *Code of Federal Regulations* Part 135 cargo flight.

The flight was operated as CPT 7727, a Federal Express Corporation feeder flight, which departed from Friedman Memorial Airport (SUN), Hailey, Idaho, about 1729 and climbed to 15,000 ft mean sea level (msl). The en route portion of the flight to SLC was uneventful. About 1817, the airplane began a descent into SLC. About 1823, when the airplane was at 12,000 ft msl, the pilot checked in with Salt Lake Terminal Radar Approach Control (TRACON), and the controller cleared the airplane to descend to 11,000 ft msl and provided waypoints for the approach. About 1835, the controller issued a transmission to all aircraft near SLC to expect light-to-moderate precipitation once abeam the airport. About 1844, the controller instructed the pilot to descend to and maintain 9,000 ft msl. About 1845, the pilot reported that the airport was in sight, and the controller told him to expect to land on runway 34R.

About 1846, the controller instructed the pilot to follow a heading of 150° and to descend to and maintain 8,000 ft msl. The controller also provided a PIREP to all aircraft in the area, indicating a windshear gain of 20 knots on an 8- to 9-mile final approach. The controller then instructed the pilot to follow a Boeing 757 on final approach for runway 34R, cautioned him about wake turbulence, and cleared the airplane for the visual approach to runway 34R.

The controller then instructed the pilot to contact the SLC tower, and the pilot acknowledged this instruction. About 1848, approach controller and the local controller both transmitted, to all aircraft on frequency, a windshear alert for runway 34L, which was parallel to runway 34R. The alert cited 15-knot loss 2 miles out for arriving airplanes.

The pilot contacted the SLC tower, and the local controller instructed the pilot that he was following a Boeing 757 on a 5-mile final approach, reported the wind from 300° at 18 knots with gusts to 29 knots, and cleared the airplane to land on runway 34R. The controller then asked the pilot of an airplane that just departed from runway 34R if they encountered windshear on climbout. The pilot reported no wind shear on climbout but stated that the midfield wind gusts were strong. The controller solicited a PIREP from the Boeing 757 that was ahead of the accident airplane. The 757 crew reported that they encountered windshear of ±

10 knots on final approach. The controller then transmitted to all aircraft on frequency, a windshear alert for runway 34R arrivals and departures, indicating a 15-knot loss over the runway.

The pilot reported that he was flaring the airplane when the local controller reported that the Boeing 757 had encountered windshear on landing. The pilot stated that, during the flare, the airplane started going sideways across the runway. The pilot also stated that he “elected to go around” because he was unable to maintain direction control of the airplane due to wind from the left and that he informed the local controller about the go-around. The pilot reported that, after adding power and climbing to about 30 ft agl, he “lowered the left wing” to counteract the drift from the runway centerline. Subsequently, he encountered a “downdraft” that was “pushing” the airplane toward the ground.

Surveillance video showed that the airplane impacted terrain off the right side of the runway in a left-wing-low, nose-down attitude. The airplane’s tail came up to a near-vertical position and then settled back down. The airplane came to a rest on its belly and right main landing gear; the nose and left main landing gear had collapsed.

Pilot Information

Certificate:	Airline transport; Commercial	**Age:**	60,Male
Airplane Rating(s):	Single-engine land; Multi-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	5-point
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	
Medical Certification:	Class 1 With waivers/limitations	**Last FAA Medical Exam:**	March 23, 2022
Occupational Pilot:	Yes	**Last Flight Review or Equivalent:**	January 26, 2022
Flight Time:	(Estimated) 10516 hours (Total, all aircraft), 6771 hours (Total, this make and model), 10565 hours (Pilot In Command, all aircraft), 148 hours (Last 90 days, all aircraft), 69 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

The pilot was hired by Corporate Air in June, 2001, and was current and qualified in accordance with FAA regulations and Corporate Air requirements.

Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	**Registration:**	N877FE
Model/Series:	208B	**Aircraft Category:**	Airplane
Year of Manufacture:	1990	**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	208B0232
Landing Gear Type:	Tricycle	**Seats:**	2
Date/Type of Last Inspection:		**Certified Max Gross Wt.:**	8785 lbs
Time Since Last Inspection:		**Engines:**	1 Turbo prop
Airframe Total Time:		**Engine Manufacturer:**	P&W
ELT:		**Engine Model/Series:**	PT6A SERIES
Registered Owner:	FEDERAL EXPRESS CORP	**Rated Power:**	500 Horsepower
Operator:	Corporate Air	**Operating Certificate(s) Held:**	On-demand air taxi (135)
Operator Does Business As:		**Operator Designator Code:**	HSYA

According to the Corporate Air operations specifications, the CE-208B airplane was authorized to conduct cargo operations in instrument flight rules (IFR) and visual flight rules (VFR) and during the day and night. The accident airplane's weight and balance were within operational limits for taxi, takeoff, and landing.

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	KSLC,4227 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	18:54 Local	**Direction from Accident Site:**	151°
Lowest Cloud Condition:	Few / 1800 ft AGL	**Visibility**	9 miles
Lowest Ceiling:	Broken / 14000 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	29 knots / 48 knots	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	300°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29.97 inches Hg	**Temperature/Dew Point:**	33°C / 13°C
Precipitation and Obscuration:	Light - Thunderstorm - Rain		
Departure Point:	Hailey, ID (SUN)	**Type of Flight Plan Filed:**	IFR
Destination:	Salt Lake City, UT	**Type of Clearance:**	IFR
Departure Time:	17:30 Local	**Type of Airspace:**	Class B

The pilot reported that he checked the weather on his phone before the flight using Aviation Digital Data Service. The pilot also reported that he reviewed the terminal area forecast, meteorological aerodrome reports, and the radar for the route of the flight.

The pilot stated he did not use the onboard weather radar during the flight. He stated that, as the airplane approached SLC, "some weather" was occurring over the mountains to the west of the airport that was moving slowly to the east. He recalled that the automatic terminal information service (ATIS) information for SLC changed a few times, mostly due to barometric pressure updates, and that the wind was from the northwest at 20 to 30 mph. The pilot stated that he was not provided with any wind information after being cleared to land.

SLC had an ASOS that was augmented by a certified weather observer. At 1833 (19 minutes before the accident), the following observations were reported: wind from 340° at 16 knots with gusts to 21 knots, visibility 10 miles or greater, thunderstorm, few cumulonimbus clouds at 11,000 ft agl, and broken ceiling at 24,000 ft. The thunderstorm began at 1827, with cumulonimbus clouds southwest moving northeast.

At 1854 (2 minutes after the accident), the following ASOS observations were reported: wind from 300° at 29 knots with gusts to 48 knots, visibility 9 miles, thunderstorm with light rain, and broken ceiling at 14,000 ft agl. The thunderstorm began at 1827, ended at 1842, and began again at 1850 with cumulonimbus cloud overhead and moving northeast.

The National Weather Service issued three SLC airport weather warnings between 1800 and 1900. The first warning, at 1817, was issued for outflow wind gusts of 30 mph/26 knots or greater. The second warning, at 1826, was issued for lightning within 5 miles of the airport through 1845. The third warning, at 1845, extended the time to 1900 for lightning within 5 miles of the airport.

The GFA applicable to the accident site that was valid at 1800 (before the airplane's departure) indicated VFR surface visibilities, scattered thunderstorms, and a southwest surface wind at 10 knots with gusts to 15 knots. The GFA cloud forecast indicated clouds above the accident site.

At 1354, the National Weather Service Storm Prediction Center issued a convective outlook with areas of general thunderstorms forecast for the accident site.

Weather radar base reflectivity images between 1836:37 and 1854:11 depicted reflectivity values between 20 and 40 dBZ moving from southwest to northeast over the accident site at the time of the accident. An increase in windspeed toward the accident site was noted at the accident time. In addition, the base reflectivity core, or the main portion of the rainfall from the thunderstorm, descended toward the accident site at the accident time.

Fifty lightning flashes were reported within 25 miles of the accident site in the 10 minutes before and after the accident time, with the closest lightning flash occurring 1 mile west of the flight track at 1850:46.

Airman's Meteorological Information (AIRMET) advisory Sierra was issued at 1445 and was valid for the accident site at the accident time. The AIRMET forecast mountain obscuration conditions due to clouds and precipitation. Convective SIGMET advisory 66W was issued at 1755 and was valid for the accident site at the accident time. The SIGMET forecast an area of thunderstorms with little movement and with cloud tops above flight level 450. Convective SIGMETs indicate the potential for windshear, lightning, and severe turbulence, among other hazards. Rain showers and convective clouds can produce downdrafts, microbursts, outflow boundaries, and gust fronts, which can create an environment favorable for unexpected changes in wind direction and speed at the surface. According to the FAA *Aeronautical Information Manual*, section 7-1-24, microbursts are typically relatively small in area (less than 1 to 2 1/2 miles in diameter) and produce strong divergent winds and downdrafts that can reach 6,000 ft per minute. Microbursts can be found in and beneath convective clouds, usually embedded in heavy rain or in "benign-appearing" virga, (trails of precipitation that fall from the underside of a cloud but evaporated before reaching the surface). If little or no precipitation is occurring at the surface, a ring of blowing dust may be the only visual cue of the microburst

Review of video imagery around the accident time revealed that virga was descending toward the accident site with gusting winds and rain.

About the time of the accident, the wind sensor that the SLC ATC tower used reported a wind gust of 16 knots. The sensor did not report a gust above 25 knots between 1852 and 1915. In addition, the Integrated Terminal Weather System and windshear displays that the tower used provided no microburst alerts until about 10 minutes after the accident.

Airport Information

Airport:	SALT LAKE CITY INTL SLC	**Runway Surface Type:**	Asphalt
Airport Elevation:	4230 ft msl	**Runway Surface Condition:**	
Runway Used:	34R	**IFR Approach:**	None
Runway Length/Width:	12002 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Go around

SLC was located about 3 miles west of Salt Lake City. The airport was serviced by an FAA air traffic control tower that operated 24 hours a day. The airport had four paved landing surfaces designated as 16L/34R, 16R/34L, 17/35, and 14/32.

According to postaccident interviews, the tower had only one sensor available, the center field/airport wind sensor, for tactical wind information distribution to pilots and for runway configuration. Additional wind sensors, one for each glideslope, were requested by SLC ATC management in November 2015, but the request was denied in April 2016 for budgetary reasons.

Wreckage and Impact Information

Crew Injuries:	1 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	On-ground
Ground Injuries:		**Aircraft Explosion:**	None
Total Injuries:	1 Minor	**Latitude, Longitude:**	40.788393,-111.97777(est)

Postaccident examination of the airplane revealed that the outboard 6 ft of the right wing was bent up about 30° and that the outboard 5 ft of the left wing was bent up about 5°. The left side of the fuselage was crumpled aft of the cargo loading door. The cockpit was undamaged. The flap lever was in the “UP” position, and the flap jack screw correlated to the flaps “UP” position. The left main strut was bent inward about 45°.

Organizational and Management Information

Corporate Air was founded in 1981 and was headquartered in Billings, Montana. The company owned and operated maintenance facilities and pilot bases in Montana, Wyoming, North Dakota, Utah, and Hawaii. The company offered feeder airline cargo service and operated a fleet of about 34 Cessna 208 Caravans on a regularly scheduled basis in the United States and Canada.

The Corporate Air *Flight Operations Training Manual* showed that special operations was a training topic provided during recurrent ground training. Windshear was considered to be a special operation

The Corporate Air *General Operations Manual*, section 3, “Operations,” provided the following about airborne thunderstorm detection equipment:

a. For the record, in Corporate Air's…airborne thunderstorm detection equipment is not required by regulation.

1. However, in the event this equipment becomes inoperative, and thunderstorms or other potentially hazardous weather can be expected along the route of the flight, the following actions will be taken by the crew:

i. Select a route of flight that will avoid the weather in question.

ii. For day operations, select a route of flight to maintain VFR conditions and that allows avoidance of this type of weather visually.

iii. Delay the flight until such weather conditions no longer exist along the route of flight.

A. Advise Flight Following of your intentions.

The Corporate Air *Flight Operations Manual*, volume 1, “Operating Bulletins,” provided the following guidance about windshear:

Wind never blows from a constant direction or speed for more than short periods, even in the most stable conditions. Shear is nothing more than a change in wind component, and since a change in either wind direction or speed changes the component, the airplane is always affected by shear. It is fascinating to observe the continuous display of wind speed and direction on an INS, IRS, or GPS equipped airplane and see the airplane’s response to just half a knot change in wind component. This ever-present kind of shear is benign; it is the sudden and large changes in component that cause the mischief. Shear causes a loss (or gain) of airspeed every time the wind component changes. While shear is often thought of as a horizontal wind effect, vertical wind components are involved as well. Aside from the ’downward’ effect of a downdraft *('microburst,' 'downburst'), as it nears the ground, it spreads out horizontally, affecting airspeed, thus lift.*

The manual also provided the following additional information about windshear and microbursts:

Low-level shear and microbursts are uniquely associated with thunderstorms, and the following should be considered mandatory.

• Never penetrate the outflow of a thunderstorm when below 1,000 ft agl.

• When approaching in an area of thunderstorms, NEVER base a go or no-go decision on the word of the guy in front of you who says he had a 'smooth ride.' And if the guy ahead of you reports a significant airspeed fluctuation due to shear, expect yours to be at least 3 times as bad.

• If you are on the ground awaiting takeoff with TRWs in the immediate area, just set the brakes until there is no doubt, no matter how long it takes.

The manual provided the following guidance about windshear recovery:

Basic TBS20 (The Bug System) Rules:

The red bug marks stall speed with 10° flaps on takeoff and 20° on approach and landing, the standard flap positions as specified in the TBS numbers tables. Its use is primarily in wind shear recovery and will be covered in detail under The Red Bug subject below.

The Red Bug:

The red bug is intended primarily as a reference, so the margin to stall can be visualized when necessary to go below V2 (or VREF) in recovering from strong shear.

Wind shear was "discovered" about 25 years ago and triggered substantial changes in training procedures. The basic "industry standard" procedure for recovering from severe "altitude-losing" shear is roughly as follows:

• Apply "firewall power" (up against the stop).

• Rotate toward a target attitude of 15°.

• If descent is not arrested at 15°, slowly increase pitch 20 "The Bug System" attitude until it is.

• Do not go below (slower than) stall warning speed.

Power Application:

• Go to "firewall power."

Target Pitch Attitude:

In the industry-standard recovery procedure, the 15° target was chosen since it is easy to remember and is more or less suitable for most types, including the jet transport. However, at lower weights Caravan shear recovery attitudes can go well above 15° at the lower end of the usable climb speed range.

TBS attitude PE may be used as the initial target (13° at 8,750 pounds, 19° at 6,000 pounds) even though the table PE is for the 10° flap position. This is justified for three reasons: 1) the TBS tables give the pilot the specific attitude for the existing weight, 2) firewall power provides an additional margin, and 3) it is used only as an initial target.

The "Don't-Go-Below-Stall Warning" Stricture:

To preserve adequate margin, under normal conditions one should not go below V2 or VREF. But that will not make it in severe cases; if you are falling out of the sky, "heroic" action is called for…

… using 20° landing flaps provides a substantially greater margin than 30°, one of the primary reasons Corporate Air requires 20° for all normal landings. In any shear that produces descent rates greater than 530 FPM (at 8,750 pounds) the shear can be outclimbed with 20° but not with 30°. Good climb capability exists below VREF—and stall warning (VSW)—down to several knots above stall speed. The climb capability available below VREF (V2 on takeoff) should be "taken out" only as much and as fast as necessary to arrest the descent, much as in a landing flare. Flaps should remain at the landing position (normally 20°) until the descent is arrested and enough climb achieved to clear obstructions.

If the descent is not arrested at the target attitude, pitch should be increased— slowly, and in small increments, with a pause after each to evaluate the results— until the descent stops. That attitude then should be held, and as soon as a climb adequate to clear obstructions is achieved, attitude should be reduced—again slowly and in small steps—as appropriate. After IAS reaches VREF and is increasing, flaps may be retracted to 10°, power reduced to normal TAKEOFF TP, and flaps retracted to 0° as after a normal takeoff.

Remember, at firewall power actual stall speed will be roughly 10 knots lower than at IDLE, the basic AFM value. However, due to lack of accurate position error data in and near the stall range at low weights, stall speed as defined by the red bug must be considered approximate only.

VS10 Stall speed with 10° flaps (the red bug). Primarily a reference for use in wind shear recovery procedures.

Corporate Air used FlightSafety Inc. to conduct some ground school and simulator training. Part of that training included windshear and microburst training. Windshear training was conducted in the simulator with the accident pilot several times, with the most recent being November 10, 2021, with a rating of "T" for "trained procedure only." The following information was provided to the accident pilot:

WIND SHEAR:

The best wind shear procedure is avoidance. Recognize the indications of potential windshear and then: AVOID.

MICROBURSTS:

Microbursts are small scale intense downdrafts that spread outward in all directions from the downdraft center as it nears the surface. This can result in both vertical and horizontal wind shears that can be extremely hazardous, especially at low altitudes. The aircraft may encounter a headwind with increasing performance (climb/increased airspeed), followed by a downdraft and tailwind, which decreases performance (descent and low airspeeds) to the point that terrain impact can occur.

Acceptable Performance Guidelines:

• Understand that avoidance is primary.

• Ability to recognize potential wind shear situations.

• Ability to fly the aircraft to obtain optimum performance.

Additional Information

FAA Advisory Circular 00-54, "Pilot Windshear Guide," dated November 25, 1988, was in effect at the time of the accident but has since been canceled. (The FAA's website stated that all ACs dealing with weather haven been consolidated into a new handbook in order to streamline access to the FAA's weather documentation) The guide provided, the following information:

Wind variations at low-altitude have long been recognized as a serious hazard to airplanes during takeoff and approach. These wind variations can result from a large variety of meteorological conditions such as: topographical conditions, temperature inversions, sea breezes, frontal systems, strong surface winds, and the most violent forms of wind change--the thunderstorm and rain shower.

This document defined windshear as – "any rapid change in wind direction or velocity." Severe windshear was defined as "a rapid change in wind direction or velocity causing airspeed changes greater than 15 knots or vertical speed changes greater than 500 feet per minute." Text that followed these definitions stated the following:

The primary focus of the Pilot Windshear Guide is directed toward windshear associated with convective weather conditions: thunderstorms, and in particular the most hazardous form of wind shear, the microburst.

An appendix addressed the microburst as a windshear threat and stated the following:

Identification of concentrated, more powerful downdrafts--known as microbursts--has resulted from the investigation of wind shear accidents and from meteorological research. Microbursts can occur anywhere convective weather conditions (thunderstorms, rain showers, virga) occur. Observations suggest that approximately five percent of all thunderstorms produce a microburst. Downdrafts associated with microbursts are typically only a few hundred to 3,000 ft across. When the downdraft reaches the ground, it spreads out horizontally and may form one or more horizontal vortex rings around the downdraft…. The outflow region is typically 6,000 to 12,000 ft across. The horizontal vortices may extend to over 2,000 ft AGL.

A review of the National Aeronautics and Space Administration Aviation Safety Reporting System (ASRS) found that, during the 10 years preceding the accident, none of the reported windshear events involved a Cessna 208 airplane. The most recent Cessna 208 windshear event recorded in ASRS was in 2006. During that event, the controller instructed the airplane to go around due to windshear, but the airplane had already landed.

A search of ASRS revealed that, during the 10 years preceding the accident, three windshear-related events at SLC were reported. One of the reports, from an SLC local controller, stated that two go-arounds had to be performed due to windshear and that at least one of them created a “potentially dangerous situation,” with departure traffic. The second report stated that, while on the downwind leg to land on runway 34L, an airplane encountered windshear and experienced a loss of 2,000 ft. The third report indicated that, while on approach to runway 34L inside the final approach fix, an aircraft entered an area of precipitation, and the wind “immediately sheared” from a tailwind of 40 knots to a crosswind of 38 knots. The aircraft’s airspeed subsequently increased by 40 kts which resulted in a flap overspeed. Both of the pilot submitted ASRS reports did not indicate any windshear alert from the air traffic controller.

Administrative Information

Investigator In Charge (IIC):	Nixon, Albert
Additional Participating Persons:	Paula Behrend; FAA; Salt Lake City, UT Jason Valenzuela; FAA; Salt Lake City, UT Allison Mattioli; NATCA; Charlotte, NC
Original Publish Date:	August 21, 2024
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=105474