Aviation Investigation Final Report

Location:	NOVATO, California	**Accident Number:**	LAX99LA135
Date & Time:	March 31, 1999, 14:35 Local	**Registration:**	N1244C
Aircraft:	Piper PA-22-135	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	1 Serious
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

The pilot stated that he was landing with a left quartering headwind. He reported that the touchdown was normal, but as he lowered the tail wheel, the aircraft weathervaned to the left into the wind. He applied full right pedal and initiated a go-around. The aircraft left the ground, turned downwind and lost lift. The airplane impacted the drainage ditch area parallel to the runway. There are drainage ditches and levees spanning the entire length on both sides of the runway. The ditches are approximately 6 to 8 feet deep and 12 feet wide, and are about 90 feet from the runway centerline. The levees are approximately 20 feet beyond the ditches. FAA Advisory Circular AC 150/5300-13, regarding runway and taxiway design, indicates the Object Free Area for the accident airport to be 200 feet on either side of the runway centerline. The AC requires the Obstacle Free Zone to be 125 feet on each side of the runway centerline, and states that obstacles within that zone cannot be higher than 3 inches above grade; the sides of the ditches and levee rise about 3 feet above grade.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The failure of the pilot to adequately compensate for the wind conditions and to maintain directional control of the aircraft while landing. A factor is the airport's failure to follow proper procedure in ensuring adequate obstacle and object free clearance around the runway.

Findings

Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER
Phase of Operation: LANDING - ROLL

Findings
1. WEATHER CONDITION - CROSSWIND
2. (C) COMPENSATION FOR WIND CONDITIONS - INADEQUATE - PILOT IN COMMAND
3. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
4. GROUND LOOP/SWERVE - NOT CORRECTED - PILOT IN COMMAND

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: GO-AROUND (VFR)

Findings
5. AIRPORT FACILITIES,RUNWAY/LANDING AREA CONDITION - DITCH
6. (F) CLEARANCE - INADEQUATE - AIRPORT PERSONNEL
7. (F) PROCEDURES/DIRECTIVES - NOT FOLLOWED - AIRPORT PERSONNEL

Factual Information

On March 31, 1999, at 1435 hours Pacific standard time, a Piper PA-22-135, N1244C, veered off runway 31 and collided with a ditch while landing at Gnoss Field in Novato, California. The aircraft, owned and operated by the pilot, sustained substantial damage. The private pilot was seriously injured. The personal flight was conducted under the provisions of 14 CFR Part 91 and originated at the Sonoma Valley Airport, Sonoma, California, approximately 1425. The flight was terminating at the time of the accident. Visual meteorological conditions prevailed and no flight plan was filed.

A Federal Aviation Administration (FAA) inspector from the Oakland Flight Standards District Office spoke to the pilot following the accident. The pilot reported that the airport traffic was landing on runway 31 and the windsock indicated a 90-degree crosswind from the west. He stated that the winds were from approximately 230 degrees at 10 to 15 knots, which gave him a left quartering headwind. He reported that the touchdown was normal, but as he lowered the tail wheel, the aircraft weathervaned to the left into the wind. The pilot applied full right pedal, and then applied power and initiated a go-around. The pilot said the aircraft left the ground, turned downwind and lost lift. The aircraft impacted the drainage ditch area parallel to the runway. The main landing gear was pushed back and upward and the firewall was bent.

The FAA inspector reported that there are drainage ditches and levees paralleling the entire length of both sides of the runway. The ditches are approximately 6 to 8 feet deep and 12 feet wide and run about 90 feet from the runway centerline. The levees run approximately 20 feet beyond the ditches. According to the FAA Airport Safety Standards Supervisor, Gnoss Airport is federally funded and therefore, subject to the provisions of FAA Advisory Circular AC 150/5300-13 regarding runway and taxiway design. The AC defines the Object Free Area, the area that must be free of objects except for essential navaids, for Gnoss Airport to be 400 feet wide, with 200 feet on each side of the runway centerline. The Obstacle Free Zone requires 250 feet in width, 125 feet on each side of the runway centerline. Obstacles within these zones cannot be higher than 3 inches above grade; the sides of the ditches and levee rise about 3 feet above grade.

The airport manager reported that the runway was initially increased from 60 to 75 feet in width to help pilots with the continuous crosswind conditions at the airport. He further indicated that a future goal is to increase the runway width to 90 feet. He stated that although he believed the ditches and levees met the FAA safety requirements, he also believed that the barriers often posed a psychological barrier for pilots landing at the field.

The swampy area around the airport is a protected wetland under the control of the State of California and impinges on the ability of the airport to alter the ditches and levees.

Pilot Information

Certificate:	Private	**Age:**	54,Male
Airplane Rating(s):	Single-engine land	**Seat Occupied:**	Left
Other Aircraft Rating(s):	None	**Restraint Used:**	
Instrument Rating(s):	Airplane	**Second Pilot Present:**	No
Instructor Rating(s):	None	**Toxicology Performed:**	No
Medical Certification:	Class 3 Valid Medical--w/ waivers/lim	**Last FAA Medical Exam:**	May 1, 1997
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	602 hours (Total, all aircraft), 33 hours (Total, this make and model), 439 hours (Pilot In Command, all aircraft), 36 hours (Last 90 days, all aircraft), 6 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	Piper	**Registration:**	N1244C
Model/Series:	PA-22-135 PA-22-135	**Aircraft Category:**	Airplane
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	22-1047
Landing Gear Type:	Tailwheel	**Seats:**	4
Date/Type of Last Inspection:	October 27, 1998 Annual	**Certified Max Gross Wt.:**	1800 lbs
Time Since Last Inspection:	59 Hrs	**Engines:**	1 Reciprocating
Airframe Total Time:	2057 Hrs	**Engine Manufacturer:**	Lycoming
ELT:	Installed, not activated	**Engine Model/Series:**	O-290-D2
Registered Owner:	ANDREW D. WAIT/JOHN LONG	**Rated Power:**	135 Horsepower
Operator:	JOHN LONG	**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 ,33 ft msl	**Distance from Accident Site:**	14 Nautical Miles
Observation Time:	14:54 Local	**Direction from Accident Site:**	50°
Lowest Cloud Condition:	3900 ft AGL	**Visibility**	10 miles
Lowest Ceiling:	Broken / 3900 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	12 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	280°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	12°C / 4°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	SONOMA , CA (0Q3)	**Type of Flight Plan Filed:**	None
Destination:	(O56)	**Type of Clearance:**	None
Departure Time:	14:25 Local	**Type of Airspace:**	Class E

Airport Information

Airport:	GNOSS FIELD O56	**Runway Surface Type:**	Asphalt
Airport Elevation:	2 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	31	**IFR Approach:**	None
Runway Length/Width:	3300 ft / 75 ft	**VFR Approach/Landing:**	Full stop

Wreckage and Impact Information

Crew Injuries:	1 Serious	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	1 Serious	**Latitude, Longitude:**	38.100021,-122.629409(est)

Administrative Information

Investigator In Charge (IIC):	Rich, Jeff
Additional Participating Persons:	LINDA MAGEE; OAKLAND , CA
Original Publish Date:	August 16, 2001
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=46020