



National Weather Service

Storm Data and Unusual Weather Phenomena



December 1999

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Number of Persons Injured	Estimated Damage Property	Estimated Damage Crops	Character of Storm
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HAWAII

HIZ007>008

Oahu North Shore - Oahu Koolau

01	0000HST	0	0	Drought
31	2359HST			

Wet weather was prevalent over much of the Aloha State in December as two upper-air lows affected the region. However, parts of southern and western areas of the island of Hawaii remained dry through the month and are still in drought conditions.

Island of Hawaii

Despite heavy rains on the windward side of the isle, leeward areas were relatively dry. Gages in Kona and leeward Kohala were mostly within the 30 to 60 percent of average range for the month.

For the year, 3 out of 17 available gages reported 1999 rainfall above average (Mt. View, 106 percent; Glenwood, 121 percent; and Kamuela Upper, 104 percent). Just seven miles away from Kamuela Upper is the gage at Kamakoa, the driest site for 1999 at 3.90 inches, or 23 percent of average. The remaining windward gages were mainly in the 75 to 100 percent of average range. Gages in the Kau District were mostly in the 40 to 60 percent of average range for the year.

The following list contains rainfall statistics for selected locations from the island of Hawaii. The first column is the observed rainfall for December. The second column is the 30-year average for that location, while the third column lists the percent of average rainfall for the month. The fourth and fifth columns are the year-to-date total and the percent of average, respectively.

	Dec 99	Avg.	% Avg.	YTD	YTD % Avg.
Island of Hawaii					
Hilo Airport	14.41	12.00	120	116.77	90
Pahala	10.21	5.40	189	28.39	52
Honaunau	1.24	3.10	40	32.30	5 0
Kamuela (Upper)	4.14	6.00	69	60.05	104
Glenwood	29.72	17.20	173	200.41	12 1
Laupahoehoe	16.16	14.80	109	107.70	72
Kamakoa	0.70	2.10	33	3.90	2 3
Kapapala	15.28	7.70	198	38.25	57

Many farmers, ranchers, and residents remained water-starved through December. However, state agricultural officials have not put a dollar amount on the drought's effects on Hawaii's farms and ranches, said Donald Martin, state agricultural statistician. Even if they tried, the true costs will continue long after the drought ends, he said. "We may have ample rainfall next year, but smaller herds and crops means we'll still be feeling the effects many years down the road," Martin said

Although Kau gages, as noted above, showed rainfall in the 40 to 60 percent of average range for the year; no rain gages are present in the area hardest hit in Kau. Two subdivisions near the southern point of the island, Hawaiian Ocean View Estates and the nearby Hawaiian Ranchos, have not had significant rainfall for three years, said Hawaii County Civil Defense Administrator Harry Kim. Because those subdivisions lack county water, their residents must pay to have water trucked in or take containers to a county spigot miles away for daily living requirements. He said with drinking and cooking the top priorities, for most residents in the area a car wash is but a distant memory.



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							Crops

HAWAII

Hawaii County

Honokaa to Pahoia	01	1150HST 1500HST			0	0	Flood
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Hawaii County

Ookala to Pahoia	01	1500HST 1710HST			0	0	Flood
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Hawaii County

Keaau to Pahoia	01	2015HST 2200HST			0	0	Flood
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Maui County

Pauwela to Hana	01 02	2115HST 0000HST			0	0	Urban/Sml Stream Fld
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Maui County

Maui	01	2130HST 2300HST			0	0	Lightning
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Lightning strikes knocked out power and damaged telephone and computer systems at summit observatories on Haleakala. The observatories included the Air Force's Maui Space Surveillance Complex and several University of Hawaii sites. No damage estimates were available.

Hawaii County

Ookala to Pahoia	01 02	2200HST 0330HST			0	0	Flood
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Honolulu County

Makaha to Wahiawa	02	0115HST 0400HST			0	0	Urban/Sml Stream Fld
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Hawaii County

Keaau to Naalehu	02	0330HST 0500HST			0	0	Flood
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Honolulu County

Wahiawa to Honolulu	02	0400HST 0700HST			0	0	Urban/Sml Stream Fld
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Hawaii County

Ookala to Naalehu	02	0500HST 0545HST			0	0	Flood
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Hawaii County

Honokaa to Naalehu	02	0545HST 1545HST			0	0	Flood
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Kauai County

Hanalei to Kilauea	02	1120HST 1400HST			0	0	Urban/Sml Stream Fld
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To put the events of 1 and 2 December into perspective, an upper-air low over the state destabilized the atmosphere, causing heavy rainfall, hail, snow, and periods of lightning. The most significant problem to occur on Oahu was the overflowing of the Lake Wilson dam near Wahiawa in the early morning hours of 2 December. This sent a torrent into Kaukonahua Stream, which rose past its banks and sent as much as four feet of water into yards downstream. Twenty homes were affected by the flood, with fifty residents having to be evacuated for a time from the Otake Camp section of Waialua.

Torrential rains caused Waiawa Stream in lower Pearl City to overflow, and fire crews used a raft to reach five stranded residents in a three-story apartment building off Lehua Avenue in the early hours of 2 December.

The upper low also dropped small hail on the upper slopes of Haleakala in Maui in the morning hours of 2 December. Icy conditions on the main road to the summit caused park officials to close it near the 7000-foot level from 4:40 AM to 8:00 AM

The storm left unusually deep snow on Mauna Kea on the island of Hawaii on 2 December, extending to as low as Hale Pohaku at the 9600-foot elevation. Drifts were as deep as two feet along the road to the 13,796-foot summit

In summary, several parts of Oahu and the island of Hawaii had 24-hour rainfall totals of more than five inches, and an upper Nuuanu site on Oahu exceeded seven inches for the 24-hour period ending 8 AM on 2 December. Heavy rain in Kauai's central



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HAWAII

mountains raised the level of the Hanalei River, but it did not get to flood stage. Ponding of roads, minor rock- and landslides, and isolated power outages were common for the early days of December in Kauai, Oahu, Maui, and the island of Hawaii

Maui County

Haiku	03	1700HST 1950HST			0	0			Urban/Sml Stream Fld
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Heavy showers caused severe road ponding on streets in the Haiku area and a rockslide onto Haiku Road.

HIZ001>007

Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast - Oahu North Shore									
	03	1700HST			0	0			High Surf
	06	0200HST							

A deep storm low far northwest of the state generated surf of 20 to 25 feet along north shores and 8 to 15 feet on west shores across the island chain. Fifty people were rescued from the waves by lifeguards on Oahu, with no major injuries reported. Also on Oahu, all north-shore beaches, and Keawaula Beach just north of Makaha on the west side, were closed for a time because of the dangerously high surf.

HIZ001>007

Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast - Oahu North Shore									
	07	1000HST			0	0			High Surf
	09	0730HST							

Storm low far northwest of the state produced surf of 10 to 15 feet on north shores and 6 to 10 feet along west shores across the Hawaiian Islands.

Hawaii County

Ookala to Paho	09	0725HST 1400HST			0	0			Flood
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Hawaii County

Ookala to Naalehu	10	0400HST 0700HST			0	0			Flood
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Hawaii County

Ookala to Hilo	10	0700HST 0840HST			0	0			Flood
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Hawaii County

Ookala to Mountain View	10	0840HST 1000HST			0	0			Flood
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Hawaii County

Ookala to Naalehu	10	1000HST 2100HST			0	0			Flood
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Honolii Beach in Hilo was closed for a time due to the Wailuku River raging after heavy downpours.

Kauai County

Hanalei to Kilauea	10	1335HST 2300HST			0	0			Urban/Sml Stream Fld
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Police reported water overflowing the Wainiha Bridge in northern Kauai at 1:35 PM, 1 hour and 20 minutes after the Lihue weather office had issued an urban and small stream flood advisory for the northern parts of Kauai.

Honolulu County

Waialua to Waimanalo	10 11	1400HST 0200HST			0	0			Urban/Sml Stream Fld
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Kauai County

Kauai	10 11	2300HST 0200HST			0	0			Urban/Sml Stream Fld
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Hawaii County

Ookala to Naalehu	11	0000HST 0720HST			0	0			Flood
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HAWAII

HIZ001>007 **Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast - Oahu North Shore**

	11	0200HST			0	0	
	12	1300HST					High Surf

Storm low well northwest of the state caused surf of 10 to 15 feet along the north shores and 6 to 10 feet on the west shores of all the islands.

Hawaii County

**Honokaa to
Naalehu**

	11	0720HST			0	0	
	12	0100HST					Flash Flood

Kauai County

**Mana to
Koloa**

	12	0830HST 1100HST			0	0	
							Urban/Sml Stream Fld

Another upper-level low affected the Hawaiian Islands from 9 to 12 December, producing heavy rain over much of the state. The most significant rainfall occurred on Kauai, Oahu, and the island of Hawaii. Important, though not excessive, precipitation fell on Lanai as well.

A brief, heavy downpour on Oahu in the midafternoon of 10 December swept a 14-year-old boy down a Waipahu drainage canal for perhaps a quarter-mile. Fortunately, the boy was pulled from the water by a passer-by. Early on 11 December, Waimea Bay and other North Shore beaches on Oahu were closed due to debris from the overflowing Waimea River and rising surf.

Showers that hit Lanai about noon on 10 December helped extinguish a 2000-acre brush fire that had been burning for about 24 hours a mile south of Lanai City.

In Hilo on the island of Hawaii, Kamehameha Avenue, from the Wailoa River to Mamo Street, was closed from 10 through 12 December because of flooding from excessive storm runoff.

All in all, 10 to 18 inches of rain fell on many southeastern and windward sections of the island of Hawaii over the three-day period of 9 to 12 December. The other isles received totals in the 3- to 5-inch range. As was the case in early December, this storm event caused occasional ponding of roadways, minor rock- and landslides, and isolated power outages throughout the island chain.

HIZ001>007 **Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast - Oahu North Shore**

	19	0500HST			0	0	
	20	0500HST					High Surf

Storm low northwest of the state generated surf of 12 to 18 feet on the north shores and 6 to 10 feet along the west shores of all the Hawaiian Islands.

HIZ001>006 **Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast**

	22	2200HST			0	0	
	24	0200HST					High Surf

Storm low northwest of Hawaii produced surf of 10 to 15 feet along the north shores of all the islands.

HIZ001>007 **Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast - Oahu North Shore**

	24	1800HST			0	0	
	26	0500HST					High Surf

Deep storm low far northwest of the state caused surf of 15 to 20 feet along the north shores and 10 to 15 feet on the west shores of all the islands.

Maui County

**Kihei to
Maalaea**

	25	1810HST 1815HST			0	0	
							Waterspout

Two waterspouts were sighted in Maalaea Bay just after 6 PM on Christmas Day. Eye witnesses said that the waterspouts moved ashore and apparently dissipated. There were no reports of injuries or damage.



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HIZ004-008	Kauai Mountains - Oahu Koolau				0	0			High Wind (61)
	26 29	2030HST 0630HST							
	West to northwest winds of 50 to 70 mph occurred near the summits of Mauna Kea and Mauna Loa on the island of Hawaii.								
HIZ001>006	Niihau - Kauai Windward - Kauai Leeward - Kauai Mountains - Oahu South Shore - Waianae Coast								
	31	0600HST 2200HST			0	0			High Surf
	Storm low far northwest of the state produced surf of 8 to 12 feet along the north shores of all the Hawaiian Islands.								
Honolulu County 1 S Waikiki	31	1250HST 1300HST			0	0			Waterspout
	Waterspout was spotted by an off-duty NWS employee about a mile south of Diamond Head on the island of Oahu								
Honolulu County Mililani Town	31	1725HST 1740HST			0	0			Funnel Cloud
	A funnel cloud was sighted by a member of the general public just overhead of Mililani in central Oahu. There were no reports of any injuries or damage from the phenomenon.								