



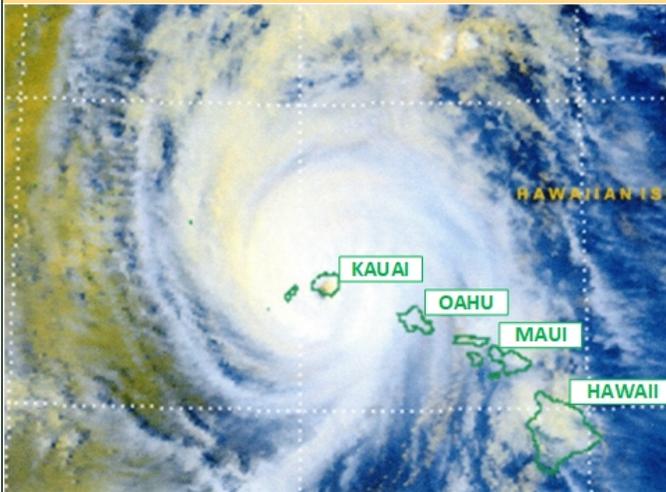
Pa'auilo Mauka Kalopa Community Association

Photo courtesy of Karl Backus

Monthly News & Updates

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September 2022 Newsletter



Hurricane Iniki perched over Kaua'i in September, 1992.

Hawai'i Hurricanes

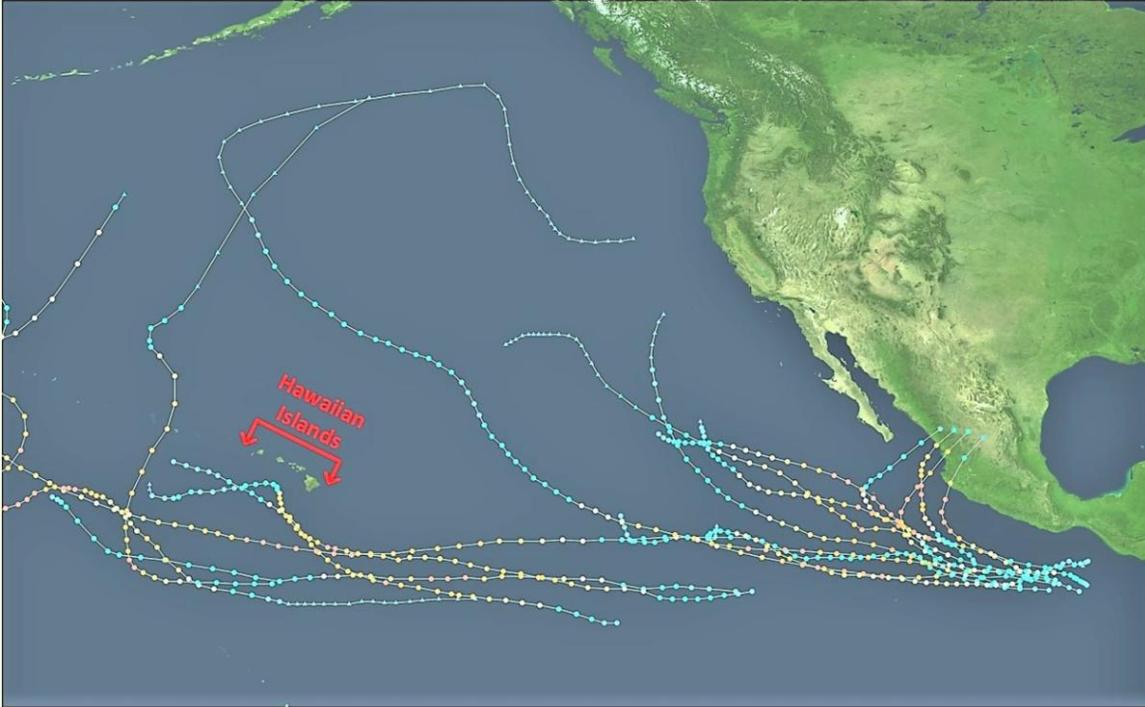
***The good, the bad, and
the really ugly!***

Denning Powell
Member PMKCA
and Pa'auilo CERT

Here's a disclaimer, right off the bat. I'm a *recovering* meteorologist. Which means I've signed a contract with Mother Nature: as long as I never attempt another forecast, she won't rain on my head when I forgot my hat.

So, this is explicitly *not* a forecast, it's just a story. But since we're into hurricane season now, it's a good time for such a story, I think.

The good. This year looks pretty calm, according to the Central Pacific Hurricane Center (CPHC). There are two main conditions that favor hurricane development and tracking near the islands: El Nino bringing warmer sea surface temperatures near the islands, and decay or migration of the high pressure system that usually hangs out to our north. When these two conditions do not occur – like this year -- nasty big storms are less likely to seriously affect us. This is because cooler waters eat away at the storm's energy source, and the wind shear, when a high pressure system is encountered, decreases the storm's wind speeds.



Some tracks of major Pacific Hurricanes.

A recent example of the “good” for our Big Island in the recent past is Iselle, which degraded very fast from a hurricane to a tropical storm before making landfall near Pahala in August 2014. It didn’t bother us up here in Hamakua too much, but south and east (mainly an area from Puna to Ka’u) took a lot of tree damage from the 60 mph winds, with some roofs torn off, power lines down with week-long outages, and roads blocked. So those folks wouldn’t call it good. I totally understand. But good and bad are relative terms... read on...

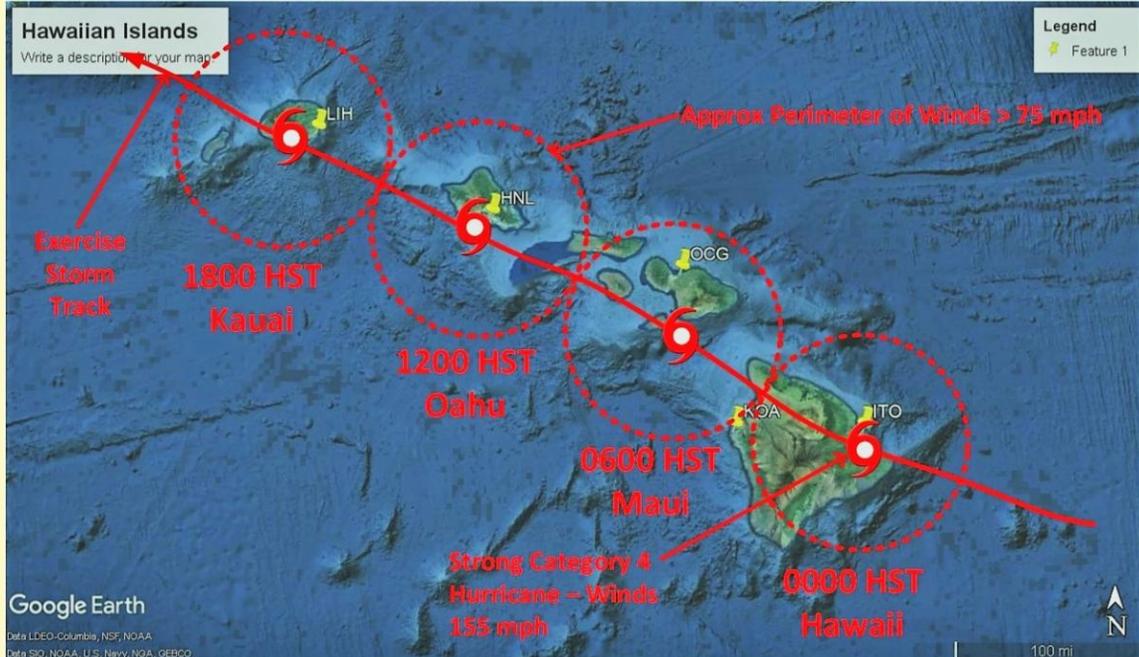
The bad. Not so lucky was our neighbor island Kaua’i in September 1992 (see the image at the head of this article.) Hurricane Iniki – a Category 4 storm which had been tracking well south of the islands – took a sudden dogleg north and ran smack over Kaua’i with winds of 130 mph. It also brought major storm surges to Kaua’i coastal areas and to the south shores of O’ahu.

Iniki tore many roofs off and totally flattened quite a few buildings. Enormous damage across the entire island. An enterprising filmmaker collected videos and put together a YouTube that’s worth watching (<http://www.youtube.com/watch?v=mH2AWs1Bxi0>) because it’s very instructive about what could happen here.

The really ugly. Our Hawaii ham radio organization -- Amateur Radio Emergency Service (ARES) -- ran a statewide hurricane exercise in July, to evaluate how ham radio could serve as emergency communications when landlines and cell towers and satellite dishes were all demolished.

(This actually happened with Category 5 Hurricane Maria in Puerto Rico a few years back, when ham radio operators established a communications lifeline along the length of the island.)

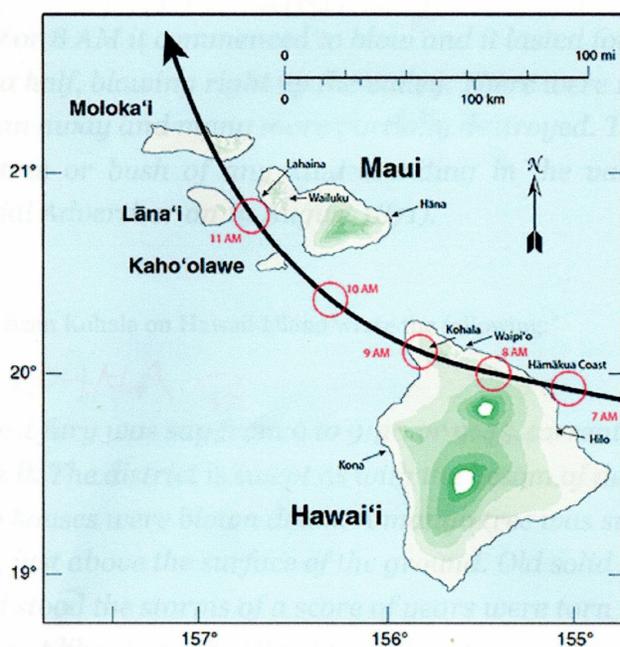
For ARES exercise purposes, the hypothetical storm here had to be a top-end Category 4 hurricane with 155 mph winds, and it had to whack all the islands with the same conditions. This wasn’t particularly plausible to me from a meteorological perspective, but I crafted it that way to fit the needs of the exercise.



Hypothetical hurricane for July's emergency radio exercise.

On the Island of Hawai'i, I brought the eye of this hypothetical storm in right over Hilo. This put the maximum wind zone right over Hamakua, with northeast winds channeled straight up Pohakea Rd here in Pa'uילו and right over the top of my house. (Hey, what can I say... I don't have enough excitement in my life, so I have to write some.) My storm crosses the Big Island and exits off Kohala, then tracks north and west to trouble Maui and the other islands. And as it leaves the Big Island, the backside of the storm whacks us with winds from the opposite direction, compounding our misery. Now don't get too excited; this is all hypothetical and not particularly plausible, right?

But... but... I did a little research, and it turns out this actually *has* happened before. Yup. August 9, 1871.



Really? The Weather Bureau only started around that time. Mercury barometers and rain gauges and anemometers existed, yes; but no computers, no satellites, and for sure no hurricane models. So how do we know this? Good question!

I'd heard of forensic anthropologists, but who knew there were such folks as *forensic meteorologists*? (I might have to retire my meteorology ticket for not suspecting that.) The story about the 1871 hurricane was published in the January 2018 issue of the *Bulletin of the American Meteorological Society*.

An historical Hawai'i Island hurricane (possible Category 4).

It turns out there is a quite significant body of damage information from accounts published in Hawaiian newspapers of that era. From examination of these, forensic meteorologists concluded it was at least a Category 3 and quite possibly a Category 4, making landfall north of Hilo and exiting the Big Island over Kohala. Much like the hypothetical storm for our radio exercise.

- An eyewitness from Waipio: “At about 7 or 8 AM it commenced to blow, and it lasted about an hour and a half, blowing right up the valley. There were 28 houses blown clean away and many more partially destroyed. There is hardly a tree or bush of any kind left standing in the valley.” From Pacific Commercial Advertiser, August 18, 1871.
- An eyewitness from Kohala: “The greatest fury was from 9:00 to 9:30 or 9:45, torrents of rain came with it. The district is swept as with the besom of destruction. About 150 houses were blown down. A mango tree was snapped as a pipe stem, just above the surface of the ground. Old solid Kukui trees, which had stood the storms of a score of years, were torn up and pitched about like chaff. Dr. Wright’s mill and sugarhouse, the trash and manager’s residence, were all strewn over the ground.” From Ke Au Okoa, August 24, 1871.

There is some local belief (*not* subscribed to by CPHC) that the two Maunas act in a way that deflects hurricanes away from the Island of Hawai‘i. But apparently, they didn’t do that in 1871.

So... what’s the bottom line? Well...

On the good news side... 1871 to 2022... that’s 151 years. A big nasty storm is clearly a statistical outlier. We’re a small target in a big ocean. And historically, most big hurricanes that form in the eastern Pacific track south of us or get degraded when they run into wind shear from that high pressure area that hangs out to the north of us. So, we’re protected a little bit.

On the bad news side... global warming is raising temperatures, including sea surface temperatures. The frequency and intensity of storm events are on the rise in many places around the world, as you may have noticed. El Nino is a cyclical phenomenon; it’s been pretty laid back the past few years, but it won’t stay that way. The location of our protective ridge of high pressure isn’t tacked down to one spot; it can move away or lose strength. And that 1871 storm occurred before the industrial revolution started putting all that extra CO2 in the atmosphere, warming our air and water.

The bottom line, with respect to damage from a possible big storm? I can’t make a forecast -- I signed that *recovering meteorologist* contract with Mother Nature. So, this is just a story. But it has a moral: don’t be complacent when it comes to hurricanes. The conditions that form them and bring them into our vicinity are fickle and somewhat unpredictable. And those conditions can sometimes all line up on the bad side. Potential risks and damages are all very location-specific, to be sure; but if a big storm tracks through our communities, things could get really ugly.

We’ve seen it before. All I can really offer is a suggestion to carefully consider what you might want to do to protect your loved ones and yourself and your property. For starters, search online for *hurricane preparedness Hawaii*. Lots of useful references will pop up, including a nice succinct Hurricane Preparedness Guide from our very own Hawaii County Civil Defense Agency. Read them.

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## **Coming PMKCA Meetings & Events**

**Look for information coming soon regarding a  
Community Clean-up Day!!**

**On a Saturday in late September, we will be inviting our members and friends to join a morning stroll down our local roads collecting trash and identifying traffic hazards. More news is forthcoming!**

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PMKCA Board of Directors Meeting,

**October 13, 2022, 7PM.
Location to be determined.**

If you would like to attend, contact a Board member for details. Members can also direct questions or concerns to any Board member for discussion at the meeting.

***Welcome, Fred Alexandre, our new
Water, Health & Utilities Committee Chairperson***

Fred Alexandre, a new property owner in our community, has volunteered to take the position of Chair of our Water, Health & Utilities Committee. The position has been vacant since the resignation of our honored member, Jami Sales. Fred is a poet and abstract artist. He and his wife, Amy, will be constructing a home soon on Ho'o Kahua Rd.

*Oh, and by the way,
Join PMKCA or Renew Your 2022 Membership!!*

Mahalo to those of you who renewed your membership at the picnic meeting! If you missed that chance, dues are only \$20 per calendar year and help support so many great community activities.

Click the "Visit our website" link below and choose Membership/Dues. We offer a PayPal option, or mail a check made out to PMKCA, PO Box 408, Pa'auilo, HI 96776. Easy-peasy - and important!

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Photo courtesy of Karl Backus