

The GP Responder

December 2024 https://gp-cert.org

Vol. 5, Issue 4

Message from GP-CERT Administrative Lead, Gordon Holtby

I hope everyone enjoys this 18th edition of the GP Responder newsletter. Unfortunately, the hyperactive 2024 hurricane season lived up to all the hype with two major hurricane landfalls in Florida. Helene and Milton rank second only to Harvey and Irma as the most destructive duo of hurricanes in a single year. 2024 was also unusual in that storm activity typically peaks between late August and mid-September - this year, that timeframe was the quietest it has been since 1950, while early July and early October were the most active those periods have been in 75 years.



Milton may be the second-costliest hurricane in Florida history when all is said and done, and our first article addresses one of the most common questions we received pre-Milton: "Should I Stay or Should I Go?". Our second article continues our practice of highlighting key members of the Command Team. Sal Baglio is an indispensable member of GP-CERT, coordinating our Special Events, while at the same time taking on the responsibilities of Zone 5 Lead. Sal, on behalf of GP-CERT, please accept my sincere thanks for all you do! The third article is a fascinating article on hurricane hunter planes and the scientists who fly them through the eyewall of hurricanes.

All residents are welcome to join the all-volunteer GP-CERT team. GP-CERT is about empowering our community – both educating our volunteers about disaster response, and communicating safety messages and information to our residents. If interested in learning more about GP-CERT, please reach out to any of the volunteers listed at the end of this newsletter for more information. Our next bi-monthly meeting is on Tuesday, January 14th, 2025 at 6:30 p.m. in the craft room, so please feel free to join us at that time.

My wife and I wish everyone a Merry Christmas and a healthy and prosperous 2025!

Sincerely, Gordon Holtby gordon.holtby@gmail.com / (847) 612-2571



Volunteers Needed!

GP-CERT is a volunteer organization that deploys in the aftermath of disasters in the community. There is a continued need for volunteers to assist in areas such as damage assessment, access control, communications, and triage (basic first aid). Volunteers will be assigned to tasks based upon their desires, skills and experience. Background/training in these areas is encouraged but not required. The GP-CERT training and preparation will allow community members to respond and assist each



other in those hours or days between the incident and the return of our property management staff. For more information or to volunteer, please go to the GP-CERT website at https://gp-cert.org or contact Gordon Holtby at gordon.holtby@gmail.com

Should I Stay or Should I Go?

(or Sound Decision Making during an Evolving Dynamic Situation)

Submitted by Robert Spong, Ed. D.

Do you remember the song from 1982 by The Clash, Should I Stay or Should I Go?

Should I stay or should I go now? Should I stay or should I go now? If I go there will be trouble And if I stay it will be double So come on and let me know



Graphic courtesy of <u>Pixabay</u> and <u>The Digital Artist</u>

Songwriters: Mick Jones, Joe Strummer.

The song is about unrequited love, but some of the song's lyrics can be equated with fight or flight instincts, basic components of human psychology. These instincts are intuitive, and they were very evident during Hurricane Milton. This article will attempt to examine reasons to flee an intense storm or shelter in place.

Facing a dynamically evolving storm situation is as complex as playing the Super Bowl. The team starts the game with a large amount of data to consider and formulate a strategy. But in the final two minutes with a point deficit on the scoreboard, and an injured quarterback, everything changes. That is the nature of a dynamically evolving situation.

When a named hurricane has targeted southwest Florida, here are a few things for Gran Paradiso residents to consider. In what type of dwelling do you live, a single-family home, a villa, a townhome, or a coach home? What is your family composition? Are you single, do you have small children, or are you a care giver for an older adult? Do you understand mandatory evacuation orders, and what they mean for residents of Gran Paradiso? What will your destination be if you elect to evacuate? Are you prepared psychologically for the strong influence of spousal concerns, distant family worries, and media click baiting?

Type of Residence

Most single-family homes and villas in Gran Paradiso are constructed of CMU (Concrete Masonry Units, Cinder Blocks) on a concrete pad with the CMU cores filled with rebar and concrete. Construction workers attach rebar using straps tied to the roof trusses, and the roofing membrane is covered with heavy tile shingles. This construction follows Miami-Dade County hurricane codes. If you have good hurricane shutters and/or hurricane proof glass, these little bunkers are very storm resistant.

If you live in a coach home or townhome with no screened enclosure, these buildings are also built using standards that make them very storm resistant. Townhomes, constructed in groups of eight, have end units slightly more exposed to storm damage than the interior units, which are well protected.

Family Composition

The composition of your family unit weighs heavily in the decision to shelter in place or evacuate. If you have small children under the age of twelve, or if you are a caregiver for an older adult, you have a broader range of responsibility for the safety of these individuals.

Graphic courtesy of Pixabay and geralt

Emergency Management and Government Mandated Evacuation Orders

With any large storm or hurricane such as Milton targeting the southwest Florida coast as a Category 5 hurricane, elected officials and emergency management personnel will alert the general population of their options. Officials may issue a state of emergency, flood warnings, tornado warnings, and/or evacuation orders. Take warnings seriously! Understand their relevancy to your specific home. Gran Paradiso is approximately eight miles from the Gulf of Mexico and two miles from the Myakka River. During Milton weather forecasters indicated the storm could create a 20-foot storm surge. That information was relevant for my friends with homes on Lemon Bay, but not for those in Gran Paradiso.

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Media and Weather Channel Reports

When tracking a major weather event, we rely heavily on the news and weather channels. Some media outlets are better than others, BUT ALL MEDIA IS VYING FOR YOUR ATTENTION. They show dramatic weather events repeatedly during storm coverage. During Milton one forecaster admitted that other stations frequently practiced clickbaiting by showing dramatic weather events. He promised to be more honest. I observed one channel showing flood scenes from the previous storm Helene to illustrate what flooding from a 20-foot surge might look like. That is clickbaiting. Just like the internet, as viewers, we need to sift through the information provided by various news and weather channels.



Graphic courtesy of <u>Pixabay and</u> <u>OpenClipArt-Vectors</u>

Spouse and Distant Family Concerns

My spouse asked me ten times if we should leave. She began asking two days before the storm to the very day of the storm. She received hourly phone calls from concerned relatives who were viewing the media stations that predicted 20-foot storm surges. We had to assure our friends and relatives that we were eight miles from the gulf and storm surge would not impact us. Always take into consideration your mental and physical health, and that of your spouse. Large dangerous storms and hurricanes elicit a great amount of anxiety. Your family's health and safety are the most crucial factors to consider.

Destination

If you decide to leave your home and seek safer refuge, where will you go? Do you have friends or family on the east coast or in Georgia, Alabama, or North Carolina? Have you allowed enough time to reach your destination before the highways become clogged and gas and hotel rooms are hard to locate? Are you sure these areas will not be impacted by a large system such as Helene? Storms and hurricanes are highly unpredictable and subject to frequent change variables. Take as much of this information into account as you can and leave at least two days prior to the storm.

Conclusion

One thing is clear. The decision you make will not be the best decision for your neighbor, or other Floridians living on Lemon Bay, Venice Island, Siesta Key, Manasota Beach Road, or Casey Key. More than 1,000 people move to Florida every day. Those locating in southwest Florida will be subject to severe seasonal weather anomalies such as hurricanes. Learning to make the right decision regarding safety at the right time is critical to managing your sanity during a hurricane. The items listed above offer several parameters to guide your decision-making process.

If you have a family with small children, you may wish to select a destination that can be a fun get away vacation but leave a few days early. If your spouse or an elder you are caring for is extremely nervous about hurricanes, leave early too. Even if you are sure your home is solidly built and has proven to withstand previous storms, leaving early is a solid decision. What is not a solid decision is waiting until the 11th hour and allowing media messaging to scare you into leaving your home. (Unless you live in a pre-manufactured home and no one in GP does.)

It would be interesting to know how many GP residents were comfortable and confident in their decision to leave or shelter in place during Milton? My wife and I have been Gran Paradiso residents since 2015. We have lived through Irma, Michael, Ian, Idalia, Helene, and Milton. It never gets easier.

Update from Rich MacCready, CERT Coordinator with Sarasota County

Rich is working with the county to develop a Damage Assessment (DA) class run by the Red Cross in Sarasota. In cooperation, the county's Emergency Management Department and the local Red Cross chapter, are looking for a dynamic group of individuals, who can be called upon to survey and complete online forms (i.e. think "phone app"). Currently, damage assessment is performed by the county, the Red Cross and FEMA. CERT members, who have completed the basic course, had an introduction to a DA session. So far, four CERT community Training Officers, including Gran Paradiso officers, are interested in taking this class. The program is still being formulated, but classes will likely be held in the Red Cross' facility in Sarasota during the February/March timeframe. More information is forthcoming later this week so that the Training Officers can begin gathering members for this class. If you're interested in participating in this class, please send an email to https://doi.org/10.1001/journal.com



Hi! My name is Sal Baglio, and I am the CERT Zone 5 Lead and Special Events Coordinator. My wife Debbie and I moved here from Connecticut in July of 2019 to enjoy our retirement in this beautiful community. I have a very diverse background in the Corporate Human Resources field and Training and Development.

My wife and I were married in August of 1975 and relocated to Harrison NY, in Westchester County. Wanting to get involved in our new community I joined the Harrison Volunteer Fire Department and was a member for 13 years, receiving certifications in basic first aid and Jaws of Life operator. During my involvement with the Harrison Fire Department, I was involved in many types of incidents including structure fires, motor vehicle accident extractions, medical emergencies as well as brush fires, to name a few. I moved up in rank over the years to First Lieutenant and then my final position as Captain of the Hook and Ladder Company. My next step would have been Chief of the Harrison Fire Department, but unfortunately, we moved from Harrison to Pleasantville NY, which ended my involvement as a first responder.

When we moved to Gran Paradiso I wanted to become involved in our community. When I found out about CERT and what it stood for, I felt this would be a good fit with my First Responder experience and leadership. I completed my Sarasota Emergency Management CERT certification course on October 3, 2021, as a member of Zone 5 under the leadership of Brian Sheftel, CERT Operations. Wanting to get more involved with CERT, I took on the role of CERT Special Events Coordinator, responsible for the coordination of any special events involving CERT participation, such as fundraising and community events. As a result of my participation, I became more involved with the Command Team along the way. When Brian moved up to CERT Operations, assuming the role of Incident Commander, I decided to take over as Zone 5 Lead. During the first quarter of 2023, under the direction of Gordon Holtby, CERT Leader, Brian and I were asked to take a look at our existing Operations Plan, and customize it to meet our community's needs. With Brian's extended knowledge as a first responder, I worked closely with him to review and rewrite our CERT Operations Manual, which is currently in place and available to all residents on the https://gp-cert.org website.

<u>Hurricane hunters fly through extreme storms to forecast intensity – here's what</u>
happens when the plane plunges into the eyewall

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THE CONVERSATION

<u>Jason Dunion</u>, Research Meteorologist, University of Miami Published: September 27, 2022

As a hurricane intensifies, hurricane hunters are in the sky doing something almost unimaginable: flying through the center of the storm. With each pass, the scientists aboard these planes take measurements that satellites can't and send them to forecasters at the National Hurricane Center.

Jason Dunion, a <u>University of Miami meteorologist</u>, has led hurricane field programs for the National Oceanic and Atmospheric Administration. He described the technology the team uses to gauge hurricane behavior in real time and the experience aboard a P-3 Orion as it plunges through the eyewall of a hurricane.

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What happens aboard a hurricane hunter when you fly into a storm?

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Basically, we're take a flying laboratory into the heart of the hurricane, all the way up to Category 5s. While we're flying, we're crunching data and sending it to forecasters and climate modelers. In the <u>P-3s</u>, we routinely cut through the middle of the storm, right into the eye. Picture an X pattern – we keep cutting through the storm multiple times during a mission. These might be developing storms, or they might be Category 5s.

We're typically flying at an altitude of around 10,000 feet, about a quarter of the way between the ocean surface and the top of the storm. We want to cut through the roughest part of the storm because we're trying to measure the strongest winds for the Hurricane Center.

That has to be intense. Can you describe what scientists are experiencing on these flights?

My most intense flight was Dorian in 2019. The storm was near the Bahamas and <u>rapidly intensifying to a very strong Category 5</u> storm, with winds around 185 mph. It felt like being a feather in the wind. When we were coming through the eyewall of Dorian, it was all seat belts. You can lose a few hundred feet in a couple of seconds if you have a down draft, or you can hit an updraft and gain a few hundred feet in a matter of seconds. It's a lot like a rollercoaster ride, only you don't know exactly when the next up or down is coming. At one point, we had G-forces of 3 to 4 Gs. That's what astronauts experience during a rocket launch. We can also get zero G for a few seconds, and anything that's not strapped down will float off.

Even in the rough parts of the storm, scientists like myself are busy on computers working up the data. A technician in the back may have launched a dropsonde from the belly of the plane, and we're checking the quality of the data and sending it off to modeling centers and the National Hurricane Center.

What are you learning about hurricanes from these flights?

One of our goals is to better understand why storms <u>rapidly intensify</u>. Rapid intensification is when a storm increases in speed by 35 mph in just a day. That equates to going from Category 1 to a major Category 3 storm in a short period of time. <u>Ida</u> (2021), <u>Dorian</u> (2019) and <u>Michael</u> (2018) are just a few recent hurricanes that rapidly intensified. When that happens near land, it can catch people unprepared, and that gets dangerous fast. Since rapid intensification can happen in a really short time span, we have to be out there with the hurricane hunters taking measurements while the storm is coming together.

So far, rapid intensification is hard to predict. We might start to see the ingredients quickly coming together: Is the ocean warm to a great depth? Is the atmosphere nice and juicy, with a lot of moisture around the storm? Are the winds favorable? We also look at the inner core: What does the structure of the storm look like, and is it starting to consolidate? Satellites can offer forecasters a basic view, but we need to get our hurricane hunters into the storm itself to really pick the hurricane apart.

What does a storm look like when it's rapidly intensifying?

Hurricanes like to stand up straight – think of a spinning top. So, one thing we look for is alignment. A storm that isn't yet fully together might have low-level circulation, a few kilometers above the ocean, that isn't lined up with its mid-level circulation 6 or 7 kilometers up. That isn't a very healthy storm. But a few hours later, we might fly back into the storm and notice that the two centers are more lined up. That's a sign that it could rapidly intensify.

We also look at the <u>boundary layer</u>, the area just above the ocean. Hurricanes breathe: They draw air in at low levels, the air rushes up at the eyewall, and then it vents out at the top of the storm and away from the center. That's why we get those huge updrafts in the eyewall. So we might watch our dropsonde or tail doppler radar data for how the winds are flowing at the boundary layer. Is that really moist air rushing in toward the center of the storm? If the boundary layer is deep, the storm can also take a bigger inhale.

We also look at the structure. A lot of times the storm looks healthy on satellite, but we'll get in with the radar and the structure is sloppy or the eye may be filled with clouds, which tells us the storm isn't quite ready to rapidly intensify. But, during that flight, we might start to see the structure change pretty quickly.

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Air in, up and out – the breathing – is a great way to diagnose a storm. If that breathing looks healthy, it can be a good sign of an intensifying storm.

What instruments do you use to measure and forecast hurricane behavior?

We need instruments that not only measure the atmosphere but also the ocean. The winds can steer a storm or tear it apart, but the ocean heat and moisture are its fuel. We use dropsondes to measure temperature, humidity, pressure and wind speed, and send back data every 15 feet or so all the way to the ocean surface. All of that data goes to the National Hurricane Center and to modeling centers so they can get a better representation of the atmosphere.

One P-3 has a laser – a <u>CRL</u>, or <u>compact rotational raman LiDAR</u> – that can measure temperature, humidity and aerosols from the aircraft all the way down to the ocean surface. It can give us a sense of how juicy the atmosphere is, so how conducive it is for feeding a storm. The CRL operates continuously over the entire flight track, so you get this beautiful curtain below the aircraft showing the temperature and humidity.

The planes also have <u>tail doppler radars</u>, which measure how moisture droplets in the air are blowing to determine how the wind is behaving. That gives us a 3D look at the wind field, like an X-ray of the storm. You can't get that from a satellite.

We also launch ocean probes call AXBTs – <u>aircraft expendable bathythermograph</u> – out ahead of the storm. These probes measure the water temperature down several hundred feet. Typically, a surface temperature of 26.5 degrees Celsius (80 Fahrenheit) and above is favorable for a hurricane, but the depth of that heat is also important.

If you have warm ocean water that's maybe 85 F at the surface, but just 50 feet down the water is quite a bit colder, the hurricane is going to mix in that cold water pretty quickly and weaken the storm. But deep warm water, <u>like</u> we find in eddies in the Gulf of Mexico, provides extra energy that can fuel a storm.

We're also testing a new technology – small drones that we can launch out of the belly of a P-3. They have about a 7- to 9-foot wingspan and are basically a weather station with wings.

One of these drones dropped in the eye could measuring pressure changes, which indicate whether a storm is getting stronger. If we could drop a drone in the eyewall and have it orbit there, it could measure where the strongest winds are – that's another important detail for forecasters. We also don't have a lot of measurements in the boundary layer because it's not a safe place for a plane to fly.

You also targeted the Cabo Verde islands off Africa recently. What are you looking for there?

The Cabo Verde Islands are in the Atlantic's hurricane nursery. The seedlings of hurricanes come off Africa, and we're trying to determine the tipping points for theses disturbances to form into storms.

Over half the named storms we get in the Atlantic come from this nursery, including about 80% of the major hurricanes, so it's important, even though the disturbances are maybe seven to 10 days ahead of a hurricane forming.

In Africa, a lot of thunderstorms develop along the Sahara desert's southern border with the cooler, moister Sahel region in the summer. The temperature difference can cause ripples to develop in the atmosphere that we call tropical waves. Some of those tropical waves are the precursors for hurricanes. However, the <u>Saharan air layer</u> – huge dust storms that come rolling off Africa every three to five days or so – can suppress a hurricane. These storms peak from June to mid-August. After that, tropical disturbances have a better chance of reaching the Caribbean.

At some point not too far in the future, the National Hurricane Center will have to do a seven-day forecast, rather than just five days. We're figuring out how to improve that early forecasting.



The Gran Paradiso Community
Emergency Response Team (GP-CERT)
has been formed to assist neighbors in
the event of a natural or man-made
disaster. The team is comprised of your
neighbors who have undertaken the
appropriate training to assist where
needed.

Please submit articles and/or corrections to the newsletter publisher, Carole Myles, at cmyles252@gmail.com.



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