The GP Responder

September 2024

https://gp-cert.org

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Message from GP-CERT Leader, Gordon Holtby

I have one request for everyone reading this 17th edition of the GP Responder newsletter—please do not become complacent. While the tropics have been on an extended break since Hurricane Beryl due to cooler ocean temperatures off the coast of Africa, this appears to be the calm before a likely flurry of activity. We know that things can change in the blink of an eye, so please stay vigilant and prepared!

The first article is a fascinating read about the "Birth of a Hurricane." Our second article details a new County reporting system that GP-CERT beta-tested with the Sarasota County Emergency Operations Center during Hurricane Debby. The third article is all about that essential item in any power outage - entitled "Let's Talk Flashlights."

The fourth article continues our practice of highlighting key members of the Command Team. Kristi Loret has been with GP-CERT since its inception. Not only does Kristi handle the responsibilities of being the Zone 1 Lead, but she also coordinates all Education and Training for GP-CERT. We are extremely fortunate to have such a committed and talented individual on our team!

Our last article deals with recognizing the signs of heat exhaustion - important with the temperatures that we have had."

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, September 10th, 2024 at 6:30 pm in the craft room. Please feel free to join us at that time.

Sincerely,
Gordon Holtby

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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

Birth of a hurricane: What meteorologists look for as they hunt for early signs of a tropical cyclone forming

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THE CONVERSATION

Xingchao Chen, Assistant Professor of Meteorology, Penn State

When tropical meteorologists peer at satellite images, they often catch sight of subtle cloud formations hinting at something more ominous brewing.

The first signs of a potential hurricane can be detected days before a storm gains its fierce momentum. Wispy cirrus clouds radiating outward, the appearance of curved banding low-level clouds and a drop in atmospheric pressure are all clues.

These early clues are crucial for predicting the onset of what might develop into a catastrophic hurricane.

I am a meteorology professor at Penn State, and my research group uses satellites and computer models to improve forecasting of tropical weather systems. With an especially fierce Atlantic storm season forecast for 2024, being able to detect these initial signals and provide early warnings is more important than ever. Here's what forecasters look for.

Conditions ripe for a hurricane

Hurricanes typically start as atmospheric tropical waves, areas of low pressure associated with clusters of thunderstorms. As these tropical waves move westward across tropical oceans, some of them can develop into hurricanes.

The formation of a hurricane hinges on several specific conditions:

Distance from the Equator: Tropical cyclones usually form at least 5 degrees from the equator. This is because the Coriolis force, crucial for the initial spin-up of the cyclonic system, is weaker near the equator. The Coriolis force is caused by the Earth's rotation, which makes moving air turn and swirl.

Warm sea surface temperatures: The sea surface temperature must be at least 26.5 degrees Celsius (about 80 Fahrenheit) for a hurricane to form. The warm water provides energy that drives the storm as the storm absorbs heat and moisture from the ocean.

Graphic courtesy of Pixabay/WikiImages

Atmospheric instability and moisture: For tropical cyclones to form, the atmosphere needs to be unstable. This means that warm surface air rises and remains warmer than the surrounding air, allowing it to keep rising and forming thunderstorms. There also needs to be plenty of moisture, as dry air can cause clouds to evaporate and weaken the upward motions within thunderstorms. These factors are essential for the development of clustered thunderstorms within the tropical waves.

Low vertical wind shear: Strong vertical wind shear can tear a developing hurricane apart. Vertical wind shear is changes in wind direction or speed at different elevations. It disrupts a storm's formation and growth and makes it hard for a hurricane to keep its vortex aligned.

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Early forecasting requires more than satellites

Recognizing the early stages in the life cycle of a hurricane has been very challenging because there aren't large numbers of surface stations and weather balloons to provide detailed atmospheric information over the open ocean.

Once a storm starts to form, the National Oceanic and Atmospheric Administration's hurricane hunter airplanes (Jason Dunion, Research Meteorologist, University of Miami, article courtesy of The Conversation) will often fly through it, taking measurements and dropping sensors to get more data. But that can't happen for every wispy cloud, particularly when the developing system is far from the coast.

One of the primary tools meteorologists currently use to forecast the early formation of hurricanes is satellite imagery, which provides real-time data on cloud patterns, sea surface temperatures and other atmospheric conditions. For instance, the GOES satellites operated by NOAA help meteorologists track the development of hurricanes with unprecedented clarity. These satellites can capture images at multiple wavelengths, allowing forecasters to analyze various aspects of the storm, such as cloud formation, precipitation and lightning activity.

However, satellite observations alone don't provide enough information for meteorologists to know which tropical waves are likely to develop into hurricanes.

To enhance forecasting accuracy, our research group has developed methods for incorporating real-time satellite data, including humidity levels and cloud patterns, into computer forecast models. This process, known as data assimilation, enables a more precise and consistent depiction of atmospheric conditions. As a result, forecasters can benefit from significantly enhanced predictive capabilities, particularly in anticipating the formation and progression of hurricanes.

We're currently working with NOAA to refine these techniques and bring them into wider use for better hurricane forecasting and earlier warnings so the public has more time to prepare. As people in North America and the Caribbean brace for what is predicted to be a particularly intense hurricane season in 2024, the need for accurate early storm forecasting has never been greater.

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Gran Paradiso CERT Utilizes New County Reporting System

Submitted by Rich MacCready

Hurricane Debby provided the opportunity in Sarasota County to utilize a new reporting system during an emergency event. Both the county's Emergency Operations Center (EOC) in Sarasota and a small subset (four teams) of the county's CERT teams took part in the effort. The CERT team of Gran Paradiso was happy to assist with this testing. The CERT teams entered data into a simple reporting system to keep the EOC aware of which CERT teams were monitoring, and possibly activated during the emergency.

The reporting form is an 11-point document that at a daily minimum, provides the EOC with the basic assessment of the CERT team findings. The form includes the necessary basic Point of Contact (POC) information, status on actions in progress, general comments, and the appropriate state level of activation ("Blue Sky" = Normal operations; "Level 3" = Active monitoring; "Level 2" = Active standup of people/place/things; "Level 1" = Active deployment).

Gran Paradiso submitted four reports during Hurricane Debby, three Level 3 reports with the first being the initial announcement of monitoring, with daily reports (mid-day timeframe), and the fourth report announcing "Blue Sky" - Gran Paradiso was returning to normal operations.

For the record, the GP weather station recorded 13.03 inches of rain during Hurricane Debby.

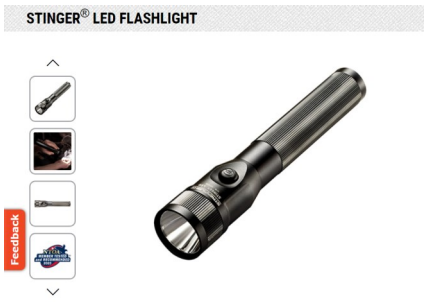
Let's Talk Flashlights

Submitted by Robert J. Spong, Ed. D.

Depending upon the severity of any given storm impacting Southwest Florida, our Gran Paradiso community could be without utility power for a day, a week, or more. During that time an essential tool to have for hurricane season is a fully functional, reliable and preferably rechargeable flashlight. Let's face it, when you reach an advanced age a little extra light on the subject is always appreciated.

My grandchildren think of me as a flashlight addict. When they come to visit, each child has a small triple A on their nightstand. When they leave, I encourage them to put the flashlight in their suitcase. Through the years I have responded in the middle of the night for emergencies. Few things can be as annoying as a non-functioning flashlight in your home or auto. Batteries are dead, contacts are corroded, or the bulb is spent. If you haven't noticed, the environment in Southwest Florida is not battery friendly.

Several solutions can be suggested. A company called Streamlight is highly regarded and frequently carried by first responders and law enforcement. The company offers flashlights in many different styles and sizes. Current offerings are mostly LED. Here is the beauty of what they offer – almost all their products are rechargeable. The Stinger model, of which I own two, has a stationary charger mounted in my garage where the flashlight resides. A charger can also be mounted in your vehicle. Whenever I need it, just like my drill or electric toothbrush, I pick it off the charger and go. These flashlights are available for purchase through Streamlight or Amazon by clicking on the pictures below.



Another product we keep in my home for emergencies and general use in closets and storage spaces is found below. This small rechargeable light can be found at both Home Depot and Lowes, also available on Amazon. The rechargeable light has three settings and four magnets on the back so it can attach to your refrigerator, a file cabinet, washing machine or garage door.

And the last light on my list for this article would be a good reliable headlamp, which is shown above. There are many situations, especially for CERT volunteers when both hands will be needed to assist in emergencies. Hands free illumination for CERT volunteers is essential.

Coupled with a large solar charged lithium battery and/or a backup generator the devices illustrated above can be recharged multiple times during a utility power outage. Stay safe and get to know your neighbors. Public First Responders will not be available during the storm and immediately after the storm.

We're continuing to highlight members of the Command Team. This month introduces Education and Training Coordinator, Kristi Loret.

Hello! My name is Kristi Loret. I am Zone Lead for Zone 1 and the Coordinator for Education and Training here at Gran Paradiso. I have been a part of this CERT team since its formation (I was in Basic class with Gordon!). My background is very different than most of our command team. I have spent most of my adult life being a mom. That alone has given me experience that most definitely translates into my responsibilities at CERT.

What, you might ask, led me to join the CERT team? Well, my children were part of a MedTech class in high school, where they were trained and certified to be members of our local CERT team in Ohio. With the knowledge of their experience and being in a new community, I decided I needed to step up and be part of the solution, rather than the problem, during any emergency! At the heart of things, I am a teacher (trained and certified). This is what led me to taking the Train-the-Trainer course. I have run CERT Basic classes over the past few years. I recently organized, with other Gran Paradiso trainers, a CERT Basic class. A total of 22 students from Grand Palm, Gran Paradiso and Islandwalk, among others, successfully completed the course. Instruction was provided over two days. Truly, this is where I thrive! I am constantly learning from all of you while teaching you.

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Heat Exhaustion: How to Recognize the Signs

Healthy people who aren't used to heat can sweat more than six cups of liquid in an hour on a super-hot day. Heat exhaustion can happen when you lose too much water and salt. Your body can overheat and struggle to cool down.

Symptoms include:
- heavy sweating
- cold, pale and clammy skin
- fast, weak pulse
- nausea or vomiting
- muscle pain or cramps
- tiredness or weakness
- dizziness
- headache
- fainting

Graphic courtesy of Pixabay/dlsdkcgl

How do you treat heat exhaustion:
Spring into action if you notice someone else with these symptoms — or if you have them yourself. If you cool off within 30 minutes, you can help prevent serious health issues. Your first step is to bring your body temperature down. Some strategies that work fast:

- Move to a cool place (in front of a fan or air conditioning).
- Loosen your clothes.
- Sip some water or a sports drink.
- Place a cool, wet cloth on your skin.
- Take a cool bath.
- Spray water on your body with a mister.
- Lie down and raise your feet.

Get medical help right away if you are throwing up, symptoms worsen, or if symptoms last more than 30 minutes.

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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GP Zone Map	https://gp-cert.org/?page_id=521

The GP Responder is a publication of the Gran Paradiso—Community Emergency Response Team. Our plan is to publish it every third month throughout the year. The GP Responder is forwarded to all residents by KW, our management company, and it is also available for viewing on the GP-CERT website at https://gp-cert.org

CERT COMMUNITY EMERGENCY RESPONSE TEAM