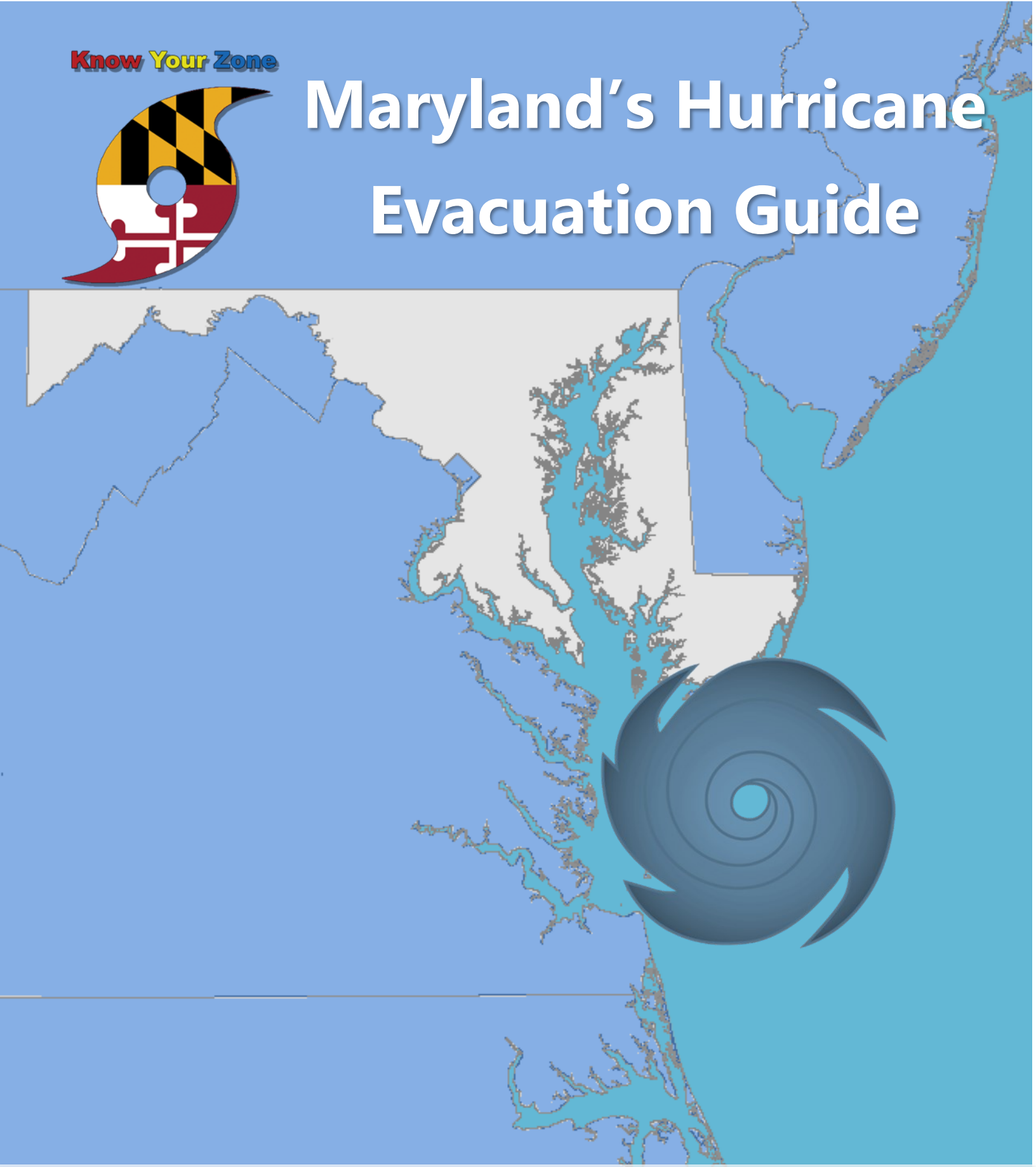
Know Your Zone

Maryland's Hurricane Evacuation Guide



Maryland Emergency Management Agency

mema.maryland.gov mdmema mdmema

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"KNOW YOUR ZONE" PARTICIPATING COUNTIES

Know Your Zone

It's as easy as A-B-C

WHAT DOES "KNOW YOUR ZONE" MEAN?

Know Your Zone serves roughly 275 thousand residents who live in areas of Maryland most vulnerable to hurricanes and other tropical storms – most notably the Eastern Shore and areas located near the Chesapeake Bay, tidal areas of the Potomac and along other tributaries. Nineteen localities, which include the City of Annapolis, City of Baltimore, Town of Ocean City, and the counties of Anne Arundel, Baltimore, Calvert, Caroline, Cecil, Charles, Dorchester, Harford, Kent, Prince George's, Queen Anne's, Somerset, St. Mary's, Talbot, Wicomico, and Worchester, participated in the Know Your Zone evacuation initiative as part of Maryland's Hurricane Evacuation Study . Tiered evacuation zones were developed in close coordination with local emergency managers throughout those high-risk areas based on the most up-to-date engineering data for the region.

Zones are designated A through C. They provide residents with clarity on whether they should evacuate in an emergency or shelter at home, based on their physical street address and the nature of the emergency event. When a serious storm is expected to threaten or impact those areas of Maryland, state and local emergency agencies will work with local news media outlets, as well as social media channels, that will then broadcast and publish evacuation directives to the public.

Find your evacuation zone at *KnowYourZoneMD.com*. The website allows you to enter your physical residence or business address in a search bar. Then, it will display a detailed, interactive, color-coded map showing each evacuation zone. Residents can use the map to view their region or zoom in to their residential neighborhood and street. Residents without Internet access should contact their local emergency management office or call 2-1-1 for assistance.

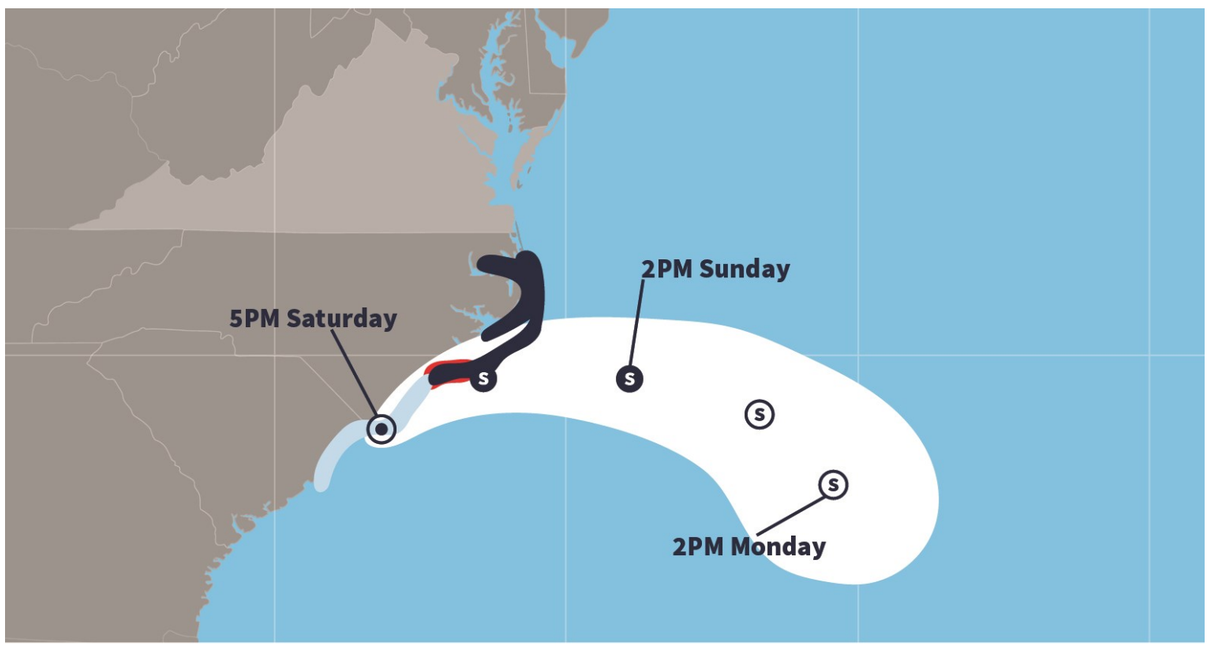
Residents not residing in a pre-identified evacuation zone should listen to local evacuation orders from local and state emergency agencies to determine if and when to evacuate.

ADVISORY VS. WATCH VS. WARNING

TROPICAL STORM OR HURRICANE ADVISORY
The NWS issues an Advisory when it expects conditions to cause significant inconveniences that may be hazardous. If caution is used, these situations should not be life-threatening.

TROPICAL STORM OR HURRICANE WATCH
The NWS issues a Watch when a tropical storm or hurricane is possible within 48 hours. Tune in to NOAA Weather Radio All Hazards, local radio, TV, or other news sources for more information. Monitor alerts, check your emergency supplies and gather any items you may need if you lose power.

TROPICAL STORM OR HURRICANE WARNING
The NWS issues a Warning when it expects a tropical storm or hurricane within 36 hours. During a Warning, complete your storm preparations and immediately leave the threatened area if directed to do so by local or state officials.



Hurricane Matthew
Saturday, October 8, 2016
5PM EDT Advisory 43
NWS National Hurricane Center

Potential Track Area:
Day 1-3 Day 4-5

Current Information:
Center Location 33.8 N 78.2 W
Max Sustained Wind 75MPH
Movement ENE at 13MPH

Watches:
Hurricane Trop. Storm

Forecast Positions:
Tropical Cyclone Post-Tropical
Sustained Winds: D <39MPH
S 39-73MPH H 74-110MPH M > 110MPH

Warnings:
Hurricane Trop. Storm

HOW TO EVACUATE

If authorities advise or order you to evacuate, leave immediately!

BEFORE YOU LEAVE

- Secure your personal property and business; remove household chemicals from the garage floor and underneath your kitchen sink. Floodwater mixed with chemicals is hazardous to you and your pet's health.
- Pack your emergency kit, critical documentation and valuables, and review your emergency communications plan.
- Keep your fuel tank filled and withdraw cash from an ATM to have on hand for necessities including: food, bottled water, medication, fuel and lodging expenses.

Know when to go: Identify your evacuation zone and stay alert by using your NOAA weather radio, FM/AM radio, smartphone apps and by listening to local media and local, state or federal officials.

WHEN EVACUATING

- Do not walk through moving water or drive into flooded areas. Do not camp or park your vehicle along streams, rivers or creeks, particularly during threatening conditions.
- Six inches of water will reach the bottom of most cars causing loss of control and possible stalling; a foot of water will float many vehicles.
- Monitor airline and train travel for delays and cancellations, especially if these modes of transportation are part of your evacuation plan.
- Make lodging arrangements prior to or at the start of your evacuation by asking to stay with friends or family or by making hotel arrangements in a region that is not under threat from the storm.
- Use apps on your smartphone that identify the latest traffic patterns, gas stations with available fuel and hotels with vacancies.
- Keep your out-of-town emergency contact, family members and friends informed of your location and progress throughout the evacuation process.

Consistently monitor local media coverage and listen to local and state officials.

EMERGENCY SUPPLIES

It can take several days or weeks, depending on the severity of the storm and your geographic location, for government services and assistance to reach you and your family. An emergency kit is vital to keeping your family sustainable.

Use this checklist to build your emergency supply kit over time by adding a few items each week or month. Many hurricane and emergency preparedness products are eligible for Maryland's tax-free weekend held annually in August. Regularly replace items that go bad over time such as water, food, medication and batteries, and remember to keep in mind your family's unique needs as you build your kit.

FOOD + SUPPLIES

- At least a 3-day supply of water and non-perishable food
- Infant formula and diapers
- Pet food and supplies (full pet-friendly checklist below)

MEDICAL NEEDS

- Medications for at least one week and copies of prescriptions
- Medical equipment, assistive technology and backup batteries
- First aid kit and antibiotic ointment
- Sunblock

TOOLS + SAFETY ITEMS

- Flashlight and batteries
- Multipurpose tool

PROTECTIVE GEAR + CLOTHING

- Extra warm clothing
- Sturdy shoes
- Blankets or sleeping bags

EMERGENCY FUNDS

- Emergency funds should be able to sustain your family for several days at a minimum. Government resource and assistance takes time.
- Plan for evacuation funds to cover fuel, lodging and meals as well as pet boarding costs if you're asked to evacuate.

Do not rely on credit cards or debit cards as critical networks such as Internet or electrical infrastructure may be damaged. Be sure to withdraw plenty of cash before the storm.

CRITICAL PAPERWORK

Prior to a storm or evacuation, collect and store copies your critical paperwork in a waterproof storage bag or container. Storing a password protected backup of your records on a virtual cloud service is also recommend.

- Driver's license and passports
- Vehicle registration and proof of insurance
- Medical and vaccination records
- Prescription medicine labels
- Birth certificates and social security cards
- Marriage certificates
- Proof of residence (deed or lease)
- Business and personal tax records
- Wills
- Household inventory (photo or video)

HYGIENE + SANITATION

Maintaining good hygiene can stop the spread of bacteria and infectious disease.

- Antibacterial soap and disinfectant
- Paper towels, toilet paper and towelettes
- Bleach and rubbing alcohol
- Toothbrush and toothpaste

COMFORT + PRICELESS ITEMS

You may be away from your home for an extended period and your property may be damaged. Grab any items that are irreplaceable or may provide comfort to your family, especially children.

- Books, small games and puzzles
- Favorite stuffed toys
- Photo albums
- Valuables and jewelry

PLAN FOR YOUR PETS

Not all shelters and hotels accept pets. Plan ahead to stay with family, friends or at other pet-friendly locations in case you need to evacuate your home.

PET-FRIENDLY CHECKLIST

- ID tags on collars and micro-chip pets
- Description and current photos of pets
- Immunization and medical records
- 1.5 gallons of water and sufficient food and medicine for at least three days per pet
- Pet medication, copy of feeding and medication schedule for caregiver, shelter or boarding staff
- Serving bowls
- Collar, leash and carrier to transport pets safely
- Pet toys and bedding

EMERGENCY COMMUNICATION

Your emergency communication plan should include extra cellular phone charging devices and batteries as well as additional communication tools; a battery-operated or crank AM/FM radio with additional batteries and a NOAA Weather Radio are recommended.

HOUSEHOLD INFORMATION

Write down phone numbers and email addresses for everyone in your household and other contacts including extended family, friends, neighbors or coworkers. This information will help you reconnect with others even if you don't have your mobile device with you or if the battery runs down.

If you have a household member(s) who is deaf or hard of hearing, or who has a speech disability and uses traditional or video relay service (VRS), include information on how to connect through relay services on a landline phone, mobile device or computer.

OUT-OF-TOWN CONTACT

Identify someone outside of your community or state who can act as a central point of contact to help your household reconnect. In a disaster, it may be easier to make a long-distance phone call because local phone lines can be overwhelmed or impaired.

SCHOOL, CHILDCARE, CAREGIVER AND WORKPLACE EMERGENCY PLANS

Make sure your household members with phones and email accounts are signed up for alerts and warnings from their school, workplace and local government agencies including: police, fire, ambulance services, public health department, public works, public utilities, school system and your local emergency management office. Following these agencies on social media will provide you with an additional avenue to access convenient and critical information.

OTHER IMPORTANT NUMBERS AND INFORMATION

You should write down, store or have convenient access to phone numbers for emergency services, utility and service providers, medical providers, veterinarians, insurance companies and other critical services.

RETURN HOME SAFELY

Each year, a significant number of people are injured or killed in the aftermath of a hurricane. As you return home and begin the recovery phase, keep these safety tips in mind:

- Do not wade in floodwaters, which can contain dangerous debris including broken glass, metal, dead animals, sewage, gasoline, oil and downed power lines.
- Do not enter a building until it has been inspected for damage to the electrical system, gas lines, septic systems and water lines or wells.
- Avoid drinking tap water until you know it is safe. If uncertain, boil or purify it first.

Watch for fallen objects and downed electrical wires; report downed power lines to your local utility provider.

POST-HURRICANE CLEAN-UP

- Wear protective equipment such as gloves, safety glasses, rubber boots and masks to protect you from debris and airborne particles, e.g., mold and dust.
- Throw out any food including canned items that were not maintained at a proper temperature or have been exposed to floodwaters. Do not eat food from a flooded garden. When in doubt, throw it out.
- Clean and disinfect everything that got wet. Mud left from floodwater can contain sewage, bacteria and chemicals.
- Air out enclosed spaces by opening all doors and windows whenever you are present. Leave as many windows open when you are not present as security concerns allow.
- Discard saturated porous materials such as mattresses or upholstered items, especially those with visible fungal growth.
- Tear out flooring, paneling, drywall, insulation and electrical outlets saturated by floodwater.

RECOVERY RESOURCES

LOCAL

Contact your local departments of Social Services, Department of Human Services, Community Services Board, Public Health, Housing Authority and local emergency management office to learn about and access additional resources and assistance after a hurricane or disaster.

Nonprofits and charities stand ready to mobilize and assist your community after a storm, including local food banks. Learning the organizations that are active in your community before a storm, and supporting these organizations throughout the year, makes these organizations sustainable and successful in their efforts to support your community after a hurricane or other disaster.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Individuals and Households Program (IHP)

After a Presidential Disaster Declaration is made, FEMA's Individuals and Households Program may provide financial help or direct services to those who have necessary expenses and serious needs if they are unable to meet these needs through other means. The following forms of help are available:

- Housing Assistance (including temporary housing, repair, replacement and semi-permanent or permanent housing construction).
- Other Needs Assistance (including personal property and other items).

FEMA may provide some assistance for home repair; then the homeowner may apply for a Small Business Administration disaster loan for additional repair assistance. FEMA will not pay to return a home to its condition before the disaster. Flood insurance may be required if the home is in a Special Flood Hazard Area.
Contact the FEMA Individuals and Households Program at 800.621.FEMA.

Public Assistance: Local, State, Tribal and Private Nonprofit

FEMA's Public Assistance (PA) grant program may provide federal assistance to government organizations and certain private nonprofit (PNP) organizations following a Presidential Disaster Declaration.

PA provides grants to state, tribal, territorial, local governments and certain types of PNP organizations, so that communities can quickly respond to and recover from major disasters or emergencies. Contact the FEMA Public Assistance Division at 202.646.3834.

SMALL BUSINESS ADMINISTRATION (SBA)

The SBA can loan money to homeowners, renters and business owners. Homeowners may borrow up to $200,000 for disaster related home repairs. Homeowners and renters may borrow up to $40,000 to replace disaster-damaged personal property including vehicles. The SBA may not duplicate benefits from your insurance or FEMA. You may receive an SBA referral when you apply with FEMA.

You can contact the SBA at 800.659.2955 from 8 a.m. - 9 p.m., Mon - Fri. or email disastercustomerservice@sba.gov.

U.S. DEPARTMENT OF AGRICULTURE (USDA)

USDA is prepared to provide food, emergency housing, community, as well as farmer and rancher assistance to individuals and small businesses affected by severe storms and flooding. USDA works with states affected by severe storms and flooding regarding requests for various assistance, waivers and flexibilities in administering federal nutrition assistance programs.

ABOUT HURRICANES

Hurricanes are severe tropical storms, massive storm systems, that form over the open water in the southern Atlantic Ocean, Caribbean Sea, Gulf of Mexico and in the eastern Pacific Ocean. Threats from hurricanes include high winds, heavy rainfall, storm surge, coastal and inland flooding, rip currents and tornadoes.

Each year, many coastal communities experience heavy rains, strong winds, floods and coastal storm surges from tropical storms and hurricanes. A hurricane's high winds may spawn tornadoes. Torrential rains cause further damage by causing floods and landslides, which not only threaten coastal communities but may impact communities many miles inland. The Atlantic hurricane season runs from June 1 to November 30, with the peak occurring between mid-August and late October.

SAFFIR-SIMPSON HURRICANE WIND SCALE

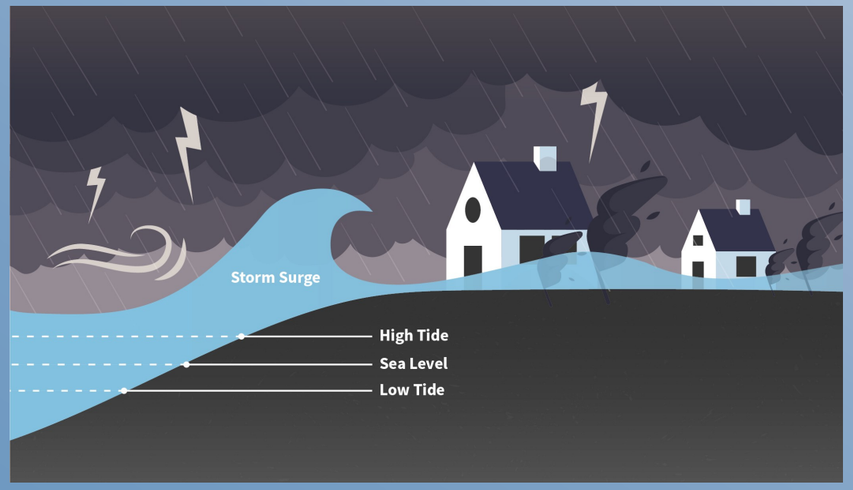
1	2	3	4	5
74-95 MPH Some Damage	*96-110 MPH Extensive Damage*	*111-129 MPH Devastating*	*130-156 MPH Catastrophic*	*157+ MPH Catastrophic*

STORM SURGE

Storm surge is an abnormal and dangerous rise of water pushed onto the shore by strong winds from a hurricane or tropical storm. A storm surge can increase the normal high tide by 15 feet or more and is the main reason why evacuations of the coast are ordered.

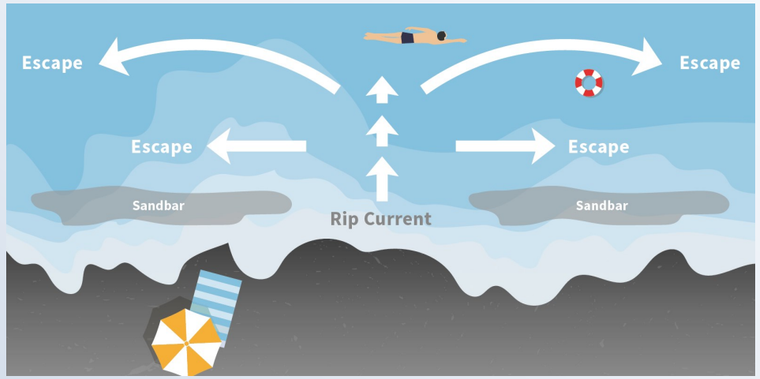
Along the coast, storm surge is often the greatest threat to life and property from a hurricane. In the past, large death tolls have resulted from the rise of the ocean associated with many of the major hurricanes that have made landfall. Hurricane Katrina (2005) is a prime example of the damage and devastation that can be caused by storm surge. At least 1,500 people lost their lives during Katrina and many of those deaths occurred directly, or indirectly, as a result of storm surge.

All residents and visitors of Coastal Maryland should know their storm surge risk. To find out your risk, review the storm surge map at KnowYourZoneMD.com



STORM SURGE VS. STORM TIDE

Storm surge is an abnormal rise of water generated by a storm and is expressed in terms of height above predicted tide levels. Storm surge should not be confused with storm tide, which is defined as the water level rise due to the combination of storm surge and the astronomical tide. This rise in water level can cause extreme flooding in coastal areas particularly when storm surge coincides with high tide, which can result in storm tides reaching up to 20 feet or more in some cases.



RIP CURRENTS, DANGEROUS SURF

Rip currents are powerful, narrow channels of fast-moving water that are prevalent along the East Coast. Rip currents form as waves disperse along the beach, causing water to become trapped between the beach and a sandbar or other underwater feature. The water converges into a narrow, river-like channel moving away from the shore at high speed. Moving at speeds of up to eight feet per second, rip currents can move faster than an Olympic swimmer.

Panicked swimmers often try to counter a rip current by swimming straight back to shore—putting themselves at risk of drowning because of fatigue. If caught in a rip current, don't fight it! Swim parallel to the shore and swim back to land at an angle.

RAINFALL AND INLAND FLOODING

Intense rainfall is not directly related to the wind speed of a hurricane, some of the greatest rainfall amounts occur from weaker storms that drift slowly or stall over an area. Inland flooding can be a major threat to communities hundreds of miles from the coast as intense rain falls from these huge tropical air masses. Inland flooding is responsible for more than half of the deaths associated with hurricanes.

Flash flooding, defined as a rapid rise in water levels, can occur quickly due to intense rainfall. Longer term flooding on rivers and streams can persist for several days after the storm. When approaching water on a roadway, always remember: **Turn Around. Don't Drown!**

DESTRUCTIVE WINDS

Hurricane-force winds, 74 MPH or more, can destroy buildings and mobile homes. Debris, such as signs, roofing material, siding and small items left outside become flying missiles during hurricanes. Winds can stay above hurricane strength well inland.

TORNADOES

Hurricanes and tropical storms can also produce tornadoes. These tornadoes most often occur in thunderstorms embedded in rain bands well away from the center of the hurricane; however, they can also occur near the eyewall.

HAZARD MITIGATION

Planning and preparing before a hurricane strikes can help you manage the impact of high winds and floodwaters. Take the steps outlined below to keep you and your family safe while protecting your home and property. If you are a renter, talk with your landlord or property manager about additional steps you can take.

PREPARE YOUR HOME

- Board up windows and close all storm shutters. Secure and reinforce the roof, doors and garage door.
- Bring loose, lightweight objects such as patio furniture, garbage cans and bicycles inside.
- Anchor objects that would be unsafe to bring inside (e.g., gas grills and propane tanks).
- Trim or remove damaged trees and limbs close enough to fall on structures.
- Secure loose rain gutters and downspouts and clear any clogged areas or debris to prevent water damage to your property.
- Purchase a portable generator or install a whole-house generator for use during power outages.
- Keep alternative power sources, such as a portable generator, outside, at least 20 feet away from the house, and protected from moisture.
- Document the condition of your home prior to the storm.

PREPARE YOUR BUSINESS

- Document employee responsibilities and roles before a hurricane strikes and review with each employee.
- Conduct a drill to ensure staff members comprehend their roles and test your emergency plans. Follow-up with an after action report and lessons learned session.
- Contact your vendors to understand their preparedness plans and how a disaster will impact your supply chain.
- Move computers and other information technology (IT) systems away from large windows and doors.
- Relocate valuables and IT systems to the upper level of your facility or to a more secure location if needed.
- Ensure vital records are protected: analyze your off-site backup record storage, place valuable documentation and digital storage media in a waterproof, fireproof box.
- Cover all doors and windows.
- Explore purchasing a flood insurance policy for your business.

EMERGENCY INFORMATION AND RESOURCES

Maryland Emergency Management Agency (MEMA) *Download the MEMA app to receive Maryland regional alerts, preparedness tips for hazards, and more.*		
www.mema.maryland.gov	MDMEMA	@MDMEMA
Maryland Department of Transportation's (MDOT) State Highway Administration (SHA) *Dial 5-1-1 for real-time traffic information.*		
www.md511.org	MDOTSHA	@MDSHA
Maryland State Police (MSP) *Dial #77 from a mobile device to report a reckless or dangerous driver to the State Police.* *Dial 9-1-1 for the nearest law enforcement office.*		
www.mdsp.maryland.gov	MarylandStatePolice	@MDSP
National Weather Service (NWS) *For active alerts, radar images, forecast maps and additional resources.*		
www.weather.gov	NWS	@NWS
Maryland receives weather information from four weather service stations.		
National Weather Service Baltimore/ Washington *Central, Capital, Southern and parts of Western region of Maryland*		
www.weather.gov/lwx	NWSBaltWash	@NWS_BaltWash
National Weather Service Pittsburgh, PA *Extreme Western region of Maryland*		
www.weather.gov/pbz	NWSPittsburgh	@NWSPittsburgh
National Weather Service Mount Holly, NJ *Upper Eastern Shore region of Maryland*		
www.weather.gov/phi	NWSMountHolly	@NWS_MountHolly
National Weather Service Wakefield, VA *Lower Eastern Shore region of Maryland*		
www.weather.gov/akq	NWSWakefieldVA	@NWSWakefieldVA
Federal Emergency Management Agency (FEMA) and the National Flood Insurance Program *Download the FEMA app to receive alerts, safety reminders, tips, local shelter info and more.*		
www.fema.gov or www.ready.gov	FEMA	@FEMA and @FEMARegion3

WHO TO CALL

State of Maryland Hotlines	
2-1-1	24/7, statewide trained professionals who listen to your situation and offer sources of help using one of the largest databases of health and human services in Maryland. Visit www.211md.org for more information.
3-1-1	In select localities throughout the state, 3-1-1 connects callers to their local government, non-emergency, citizen services including information, services, key contacts and programs.
5-1-1	Maryland 511 offers real-time traffic information throughout the state, including access to the state's system of traffic cameras. Anytime you need it, anywhere you are. For more information, visit www.md511.org.
7-1-1	Maryland Relay was established in 1991 to serve Marylanders who have difficulty using a standard telephone and provides a vast array of solutions to meet the diverse needs of our State. For more information, visit www.doit.maryland.gov/mdrelay.
8-1-1	"Miss Utility," is a free communications center for excavators, contractors, property owners and those planning any kind of excavation or digging. When recovering from a disaster, an individual or business may plan to excavate. Before any digging, call 8-1-1, where participating utilities will locate and mark their underground facilities and lines in advance to prevent a possible injury, damage or monetary fine.
9-1-1	For emergencies only, including fire, medical, reporting accidents, crimes in progress and suspicious individuals or events. 9-1-1 is not to be used for traffic or weather updates and information request, please keep the lines clear for those seeking emergency support.