HURRICANE PREPAREDNESS

ABOUT HURRICANES

Hurricanes are severe tropical storms, massive storm systems, that form over the open water. Threats from hurricanes include high winds, heavy rainfall, storm surge, coastal and inland flooding, rip currents and tornadoes.

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 SCALE

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

Virginia Department of Emergency Management

www.vaemergency.gov VAemergency @VDEM

ABOUT HURRICANES

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 are ordered.

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.

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 FLOODS

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."**

HURRICANE CAMILLE | AUG. 19-20, 1969	Dropped 27 inches of rain, on Nelson County in 8 hours resulting in 153 fatalities from flash floods and mudslides.
TROPICAL STORM AGNES | JUNE 21, 1972	Dropped 16 inches of rain on Fairfax County. At the height of the flooding, over 600 miles of highways were submerged across the state.
HURRICANE FRAN | SEPT. 5-6, 1996	Dropped 8 to 16 inches of rain over the mountains and the Shenandoah Valley; in one hour some areas saw 3.5 inches of rain.
HURRICANE ISABEL | SEPT. 18, 2003	Dropped 20 inches of rain in Sherando, Va. Turned 100 Virginia localities into disaster areas and the storm killed 32 people. 80 percent of the state's population was without power.
HURRICANE MATTHEW | OCT. 8-9, 2016	Dropped over a foot of rain in southeast portions of Virginia, rainfall and moderate tidal flooding led to severe flooding and more than 260,000 customers were without power.

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.

ADVISORY vs. WATCH vs. WARNING

- ADVISORY -
Issued when conditions are expected to cause significant inconveniences that may be hazardous. If caution is used, these situations should not be life-threatening.

- WATCH -
Issued 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 info. Monitor alerts, check your emergency supplies and gather any items you may need if you lose power.

- WARNING -
Issued when a tropical storm or hurricane is expected 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 or shelter in place if no evacuation has been ordered.

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

- ☐ 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.
- ☐ Explore purchasing a flood insurance policy for your business.

FLOOD INSURANCE

Just one inch of water in a home or office can cost thousands in cleanup costs, including replacing drywall, baseboards, floor coverings and furniture. Buying flood insurance is the best way to protect your home, your business and your family's financial security from the costs associated with flood damage.

TALK TO YOUR INSURANCE AGENT ABOUT PURCHASING FLOOD INSURANCE AND REMEMBER:

- Contact the National Flood Insurance Program (NFIP) call center at 888.379.9531 to request an agent referral or visit www.floodsmart.gov.
- There is a 30-day waiting period before a flood insurance policy takes effect.
- Most property insurance policies do not cover flood losses, so you will need to purchase separate flood insurance.
- Annual premiums start at $112/year and increase according to the level of flood risk and amount of coverage needed.
- If you rent or own a condominium unit, it is a good idea to purchase both building (if you own the unit) and contents coverage. If you are a tenant, contents-only coverage is available.
- Though flood insurance isn't federally required, nearly 25 percent of all NFIP flood claims occur in moderate-to-low risk areas.
- There is at least a 26 percent chance you'll experience a base flood during the lifetime of your mortgage.

For more information about flood safety and additional resources, visit www.vaemergency.gov/floods.

RECOVERY RESOURCES

LOCAL

Contact your city or county's department of Social Services, Human Services, Community Services Board, Public Health, Housing and local emergency management office to 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. 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. 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.

To find out how you can help after a natural disaster, visit the National Voluntary Organizations Active in Disaster website at www.nvoad.org.

EMERGENCY RESOURCES

VIRGINIA DEPARTMENT OF EMERGENCY MANAGEMENT (VDEM)	www.vaemergency.gov VAemergency @VDEM
VIRGINIA DEPARTMENT OF TRANSPORTATION (VDOT)	www.511Virginia.org VirginiaDOT @VaDOT
VIRGINIA STATE POLICE (VSP)	www.vsp.state.va.us VirginiaStatePolice @VSPPIO
NATIONAL WEATHER SERVICE (NWS)	www.weather.gov NWS + NWSWakefieldVA NWS_BaltWash + NWSBlacksburg @NWS + @NWSWakefieldVA @NWS_BaltWash + @NWSBlacksburg
FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)	www.fema.gov or www.ready.gov FEMA @FEMA and @FEMARegion3

WHO TO CALL

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 Virginia. Visit www.211virginia.org for more information.*
3-1-1	*In select localities throughout the Commonwealth, 3-1-1 connects callers to their local government, non-emergency, citizen services including information, services, key contacts and programs.*
5-1-1	*"Know Before You Go," offers real-time traffic information throughout the Commonwealth. Anytime you need it, anywhere you are. For more information, visit www.511virginia.org.*
8-1-1	*"Call Before You Dig - It's the Law," is a free Virginia 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.*

Visit our website to download the full Virginia hurricane evacuation guide, emergency kit checklist and emergency communication plan information.