



Scenario 4: Hurricane/Flood Answer Key

1. Residents and business owners in coastal areas are at risk from storm surge which the National Oceanic and Atmospheric Administration defined as “an abnormal rise of water generated by a storm, over and above the predicted astronomical tide.” On the other hand, residents living and working adjacent to rivers face a significant risk from river flooding caused by significant rainfall or snowmelt. To determine if your home or business is in a flood zone, visit: <https://msc.fema.gov/portal/home> and enter your home’s address. To learn more about flood mapping and to understand your risk, see this link: <https://www.floodsmart.gov/why/all-about-flood-maps>.
2. A Hurricane Watch means that hurricane conditions (sustained winds of 74 mph or higher) are **possible** within a specified area. A Hurricane Watch is issued 48 hours in advance of the anticipated onset of tropical-storm-force winds in an area. A Hurricane Warning, on the other hand, means that hurricane conditions (sustained winds of 74 mph or higher) are **expected** within a specified area. Because hurricane preparedness activities become difficult once winds reach tropical storm force (sustained winds of 39 to 73 mph), the hurricane warning is issued 36 hours in advance of the anticipated onset of tropical-storm-force winds to allow for important preparation.
3. Place sand bags in areas that are most at risk from flooding. Before hurricane season, try to elevate mechanical devices (i.e. air conditioners, generators, circuit breakers) to minimize the risk of impact by storm surge. See the Homeowner’s Guide to Retrofitting for how to protect your home from flooding: <https://www.fema.gov/media-library/assets/documents/480>
4. A central meeting point should be established **prior** to a hurricane watch or hurricane warning being issued, so that if the power does go out, people know where to meet up with their loved ones. Another necessity is having a Go-Kit which, at the very minimum, should include water (one gallon per person, per day) and/or water purification tablets, a first-aid kit, a flashlight, batteries, a hand-crank/solar powered radio, non-perishable food, cash (in small denominations), a wrench (to turn off utilities), hand sanitizer, a mylar blanket, ear plugs, and a book and/or deck of cards.
5. Make sure to have items and services in place **before** a hurricane watch or warning is issued. If a loved one is comforted by a certain item (a blanket, photograph, stuffed animal, etc.), be sure to pack the item when evacuating. If a relative requires regularly scheduled mental health therapy, make sure that his/her mental health provider is aware of the location of the shelter.
6. Critical documents should be stored in Ziploc bags and kept in a safe place. Another option is to keep critical documents stored on a cloud drive, on a flash drive kept in an alternate location, or in a safety deposit box.
7. Create a Go-Kit for your pet with essential items, including food, water, medication and favorite toys (if applicable). Include your veterinarian’s contact information and be sure that your pet is microchipped or at least has ID tags displayed. Your local Office of Emergency Management should be able to help you determine which shelters will accommodate pets during an evacuation.
8. Many coastal areas have predetermined coastal evacuation routes which are identified by blue signs. If possible, familiarize yourself with the route by driving through it and determining the location to which it leads. Evacuating to a friend or relative’s home outside of the expected landfall area allows you to minimize the risks associated with any impending hurricane or flood damage.
9. Communicating via text messaging is a good way to contact one another should phone lines and cellular towers get damaged. Another option to consider is utilizing social media to get in contact with family and friends. This includes Twitter, Facebook, Instagram, etc.



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10. Floods happen anywhere – more than 20 percent of flood insurance claims come from outside high-risk areas (mapped floodplains). Flood damage is costly – just an inch of water in your home can cause \$25,000 in damage. Coastal storms are not the only cause of floods – flooding can be caused by heavy rainfall, poor drainage in low-lying areas, and in urban areas that have a lot of impervious cover. In the event of a storm, federal disaster assistance may be limited or unavailable – most types of federal disaster assistance require a presidential disaster declaration and come in the form of low-interest disaster loans that must be repaid with interest. For information on how to purchase flood insurance, see this link <https://www.floodsmart.gov/how/how-do-i-buy-flood-insurance>
11. There are several steps that a homeowner can take to reduce damages in a flood. These include wet floodproofing measures such as elevating or floodproofing building utilities and using damage-resistant materials. There are also dry floodproofing techniques, barrier installations, and interior retrofits. Examples are presented in the publication Reducing Flood Risk to Residential Buildings That Cannot Be Elevated found at the link: <https://www.fema.gov/media-library/assets/documents/109669>
12. The Atlantic hurricane season runs from June 1 through November 30, while the Pacific hurricane season runs from May 15 to November 30. Hurricanes can happen along any U.S. coast or territory within the Atlantic and Pacific oceans, can affect areas 100+ miles inland, and are most active in September. Storm Surges are the primary cause of deaths from hurricanes – they are fast and can produce extreme flood damage. When storm surge occurs, over 20 feet of water can be pushed toward the shore and several miles inland, often leading to injuries and deaths in its path.
13. After a hurricane, there is still a high chance that you could be injured by floodwaters or debris. It is important to wear protective clothing while cleaning up and to not work alone. Additionally, many hurricanes lead to downed power lines, which can electrically charge flood waters and lead to serious injury or death. Ensure that you do not touch wet electrical equipment and turn off electricity at your home’s primary breaker to prevent shock. Finally, avoid wading in floodwaters, which oftentimes contain dangerous debris.