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Upcoming Issue in February 2012 Communication



Forms of communication, to say the least, have changed in the last 15 years. We were excited at the advent of e-mail and cellular phones. However, with the induction of social media, the world of communications has changed. Next month we will note some historical facts about communication and how you can create a communication plan for you and your family.

2012 Upcoming Topics

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City of Santa Barbara

Get Ready Santa Barbara!

Explore Emergency Management in 2012



The Many Faces of Flooding

There are few places on Earth where people need not be concerned about flooding. Any place where rain falls is vulnerable, although rain is not the only impetus for flood.

A flood occurs when water overflows or inundates land that's normally dry. This can happen in a multitude of ways. Most common is when rivers or streams overflow their banks. Excessive rain, a ruptured dam or levee, rapid ice melting in the mountains, or even an unfortunately placed beaver dam can overwhelm a river and send it spreading over the adjacent land, called a floodplain. Coastal flooding occurs when a large storm or tsunami causes the sea to surge inland.

Most floods take hours or even days to develop, giving residents ample time to prepare or evacuate. Others generate quickly and with little warning. These flash floods can be extremely dangerous, instantly turning a babbling brook or creek into a thundering wall of water and sweeping everything in its path downstream.

Disaster experts classify floods according to their likelihood of occurring in a given time period. A hundred-year flood, for example, is an extremely large, destructive event that would theoretically be expected to happen only once every century. But this is a theoretical number. In reality, this classification means there is a one-percent chance that such a flood could happen in *any* given year.

Moving water has awesome destructive power. When a river overflows its banks or the sea drives inland, structures poorly equipped to withstand the water's strength are no match. Bridges, houses, trees, and cars can be picked up and carried off. The erosive force of moving water can drag dirt from under a building's foundation, causing it to crack and tumble.

When floodwaters recede, affected areas are often blanketed in silt and mud. The water and landscape can be contaminated with hazardous materials, such as sharp debris, pesticides, fuel, and untreated sewage. Potentially dangerous mold blooms can quickly overwhelm water-soaked structures. Residents of flooded areas can be left without power and clean drinking water, leading to outbreaks of deadly waterborne diseases like typhoid, hepatitis A, and cholera.

Most flood destruction is attributable to humans' desire to live near picturesque coastlines and in river valleys. Aggravating the problem is a tendency for developers to backfill and build on wetlands that would otherwise act as natural flood buffers.

In Santa Barbara the average rainfall is 19+ inches a year. There have been 12 declared disasters relating to storm and flood damage. The types of flooding that can occur in Santa Barbara range from swift water in the watershed areas and creek areas and slow-rising water near the coastline. Knowing the flood types in your area will help to prepare you and your family to evacuate or Shelter-in-Place.

County Flood Control has a booklet "[Homeowners Guide for Flood Prevention and Response](#)" to assist homeowners with preparedness efforts.

For maps on where your live go to the City of Santa Barbara OES website at www.santabarbaraca.gov/oes

Excerpts for this article is from the [National Geographic](#) website



Disaster Facts: Fire Tornadoes

Also known as fire whirls, fire devils, or even firenadoes, these whirlwinds of flame are not really rare, just rarely documented, said [Jason Forthofer](#), a mechanical engineer at the U.S. Forest Services' Missoula Fire Sciences Laboratory in Montana.

Forthofer studies fire tornadoes with the aim of protecting firefighters.

"If we can identify conditions that are conducive to fire whirls, that would be a heads-up for firefighters, because there have been some [people] that have been burned by them," he said

Fire tornadoes occur when intense heat and turbulent wind conditions combine to form whirling eddies of air. These eddies can tighten into a tornado-like structure that sucks in burning debris and combustible gases. A fire tornado consists of a core—the part that is actually on fire—and an invisible pocket of rotating air that feeds fresh oxygen to the core.

The core of a typical fire tornado is usually about 1 to 3 feet wide and 50 to 100 feet (15 to 30 meters) tall. But under the right conditions, very large fire tornadoes—several tens of feet wide and more than a thousand feet tall—can form. (Related: ["Giant 'Tornadoes' Seen Erupting From the Sun."](#))

Combustible, carbon-rich gases released by burning vegetation on the ground are fuel for most fire tornadoes. The vegetation on the ground heats up enough to release gas, but some of the gas can't combust, because it doesn't have enough oxygen around it.

When sucked up by a whirl of air, this unburned gas travels up the core until it reaches a region where there is enough fresh, heated oxygen to set it ablaze. That's why the flames in a fire tornadoes core look so tall and skinny. The [gases] can't burn until they mix with enough oxygen, and that might not happen until way up above the ground.



Fire tornadoes can set objects in their paths ablaze, and they can hurl burning debris out into their surroundings. The winds generated by a fire tornado can also be dangerous. Large fire tornadoes can create wind speeds of more than a hundred miles (160 kilometers) an hour—strong enough to knock down trees. Fire tornadoes can last for an hour or more and can't be extinguished directly.

Article courtesy of [National Geographic](#)
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Contributor: Jason Forthofer

Flood Terminology

Know Flood Terms and Definitions



Flood/Flash Flood Watch:

Expected rainfall could cause creeks, streams, and/or rivers to overflow. Conditions create a threat of flooding but the occurrence is not certain or imminent.

Flood Warning: Main rivers or important creeks are expected to reach or exceed flood stage. Flooding is imminent and there could be a serious threat to life or property near major creeks.

Flash Flood Warning: Flooding caused by heavy or excessive rainfall in a short period of time is occurring or imminent. Flash flood warnings can be issued as a result of torrential rains, a dam failure, or ice jam.

Debris Flow: A form of rapid mass movement in which a combination of loose soil, rock, and organic matter, air, and water mobilize as a slurry that flows down slope.

Did You Know:

1995 Floods of Santa Barbara

The floods of 1995 brought widespread flooding to Santa Barbara County. The most severe flooding occurred on the south coast. The 1995 flood was more severe and widespread than either the 1967 or 1969 floods. Estimated public and private damages were around \$100 million and the area was declared a federal disaster area. Approximately 510 structures were reported flooded and/or damaged along the south coast, with a total cost resulting from public and private damages of approximately \$50,000,000. All modes of transportation in and out of the south coast were cut off for several hours; some modes of transportation were not restored for several days.

Source: [SB County Flood Insurance Study](#)

City of Santa Barbara Office of Emergency Services



OES is on the web!

<http://www.santabarbaraca.gov/OES>

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City News

The City of Santa Barbara Office of Emergency Services will be conducting an Earthquake Functional Exercise with City staff and outside agencies. The Exercise will be conducted on Thursday January 26, 2012.

The objectives of the exercise:

1. Assess the ability to establish and maintain communications between City's Emergency Operations Center (EOC) Sections, Department Operation Centers (DOC), and the Operational Area.
2. Exercise the ability to activate, staff, and operate the Emergency Operations Center.
3. Identify shortfalls in resources, limits in capabilities, and conflicts in response planning. Identify key actions to be taken and by which department/division.
4. Evaluate flow of public information; including interfacing with, and use of, media resources.