# Storms, Floods, Mudslides

Those living in San Mateo Coastside are susceptible to the damage caused by thunder storms, heavy rains, floods and mudslides.

# **Severe Thunderstorms**

While all thunderstorms are dangerous, the National Weather Service (NWS) defines a severe thunderstorm as one that meets at least one of the following conditions:

- Produces hail at least ¾ inch in diameter.
- Has winds of 58 miles per hour or greater.
- Produces a tornado.

#### The risks associated with severe thunderstorms include:

- Lightning
- Downed trees and blocked roads
- Hail -- Pets and livestock are particularly vulnerable to hail
- Down bursts and straight-line winds
- Flash floods
- Tornadoes

# What to do if caught in a severe thunderstorm:

- Avoid water sources
- Avoid using the telephone. Cell phones are considered safe to use indoors, though there is some risk when used outdoors during a storm.
- Avoid contact with metal surfaces
- Avoid storm-damaged areas
- Avoid flooded roadways
- Watch for fallen power lines and trees
- Seek shelter in a substantial, permanent, enclosed structure.
- Avoid unprotected shelters. If there are no permanent shelters within reach, take
  shelter in a car. Pull safely to the side of the road. Keep all windows closed and do not
  touch anything that is metal. If in the woods, find an area that is protected by low trees
  (not a single tall tree in the open). As a last resort, go to a low-lying area, away from
  trees, poles and metal objects. Squat low to the ground and place your hands on your
  knees with your head between them. Make as small a target as possible.
- Do not lie flat on the ground
- Avoid natural lightning rods, such as trees, golf clubs, tractors, fishing rods and camping equipment.

#### **Floods**

"Rule number one" is to move quickly to higher ground. Flood waters can carry debris, scour soil and asphalt, and trigger landslides. Even shallow-depth, fast-moving waters of 24 inches

can produce enough force to carry away a vehicle, and 6 inches of swiftly moving water can knock someone off his or her feet.

#### If you must evacuate:

- Take your Disasters Supply Kit
- Refer to your Evacuation Plan
- Do not walk, swim or drive through floodwaters. Learn and practice driving the local evacuation routes.
- Stay off bridges over fast-moving water. Fast-moving water can wash bridges away without warning, especially if the water contains heavy debris.
- Keep away from waterways. If you are driving and come upon rapidly rising waters, turn around and find another route. Move to higher ground away from rivers, streams and creeks.
- Pay attention to barricades. Local responders and neighbors may place barricades to warn of flooding ahead or to direct traffic safely out of the area. Never drive around barricades.
- Avoid storm drains and irrigation ditches. During a flood, storm drains and irrigation ditches fill quickly with fast-moving water. Walking in or near storm drains or irrigation ditches is nearly a sure way to drown.
- Keep family together.

# Precautions to follow after a flood:

- Stay out of flooded areas. Flooded areas remain unsafe. Entering a flooded area places you, and the individuals who may need to rescue you, at risk.
- Reserve the telephone for emergencies only. A non-emergency call may prevent an
  emergency call from getting through. It is best not to use the phone unless absolutely
  necessary.
- Avoid driving, except in emergencies. Reserve the roads for those who must evacuate and for emergency vehicles.
- Wait for authorities to issue a clear message that it is safe to return to evacuated areas.
- Be aware that snakes and other animals may be in your house in the aftermath of a flood. Look for boards and dark spaces and investigate with care.

# **Landslides and Mud Flows**

Landslides tend to worsen the effects of flooding that often accompany them. In areas that have been burned by forest and brush fires, a lower threshold of precipitation may initiate landslides.

While some landslides move slowly and cause damage gradually, others move so rapidly that they can destroy property and take lives suddenly and unexpectedly.

#### Areas that are generally prone to landslides include:

- Existing old landslides
- The bases of steep slopes
- The bases of drainage channels

Developed hillsides where leach-field septic systems are used.

<u>Debris flows</u> – sometimes referred to as mud slides, mud flows, lahars, or debris avalanches are common types of fast-moving landslides. Flows usually start on steep hillsides as shallow landslides that accelerate to speeds that are typically about 10 miles per hour, but can exceed 35 miles per hours.

The consistency of debris flows range from watery mud to thick, rocky mud that can carry away items such as boulders, trees and cars. When the flows reach flatter ground, the debris spreads over a broad area.

# Be prepared for a landslide:

- Familiarize yourself with the land around you. Knowing the land can help you assess your risk.
- Watch for patterns of storm water drainage on slopes near your home and especially
  the places where runoff water converges, increasing flow over soil covered slopes.
   Watch the hillsides around your home for any signs of land movement, such as small
  landslides or debris flows, or progressively tilting trees. Noticing small changes could
  alert you to an increased threat of a landslide.
- Discuss landslides and debris flows with members of your family.
- Be aware that, generally landslide insurance is not available; however in some cases, debris flow damage may be covered by flood insurance policies from the National Flood Insurance Program.