

Flood Protection Tips

What causes flooding in Orange County?



Floods can occur in Orange County at any time during the year. However, flooding most frequently occurs during the rainy season, which extends from June to October. Flooding is more severe when the ground has been saturated due to previous heavy rainfall and the ground water table is high. Flooding around lakes is typically a result of prolonged heavy rainfall on lakes that are already high due to a wetter than normal year. Historically, flooding along streams is due to prolonged heavy rainfall over the drainage area draining to the stream.

Major storms affecting the Orange County area include Hurricanes Donna (1960), Frances (2004), and Jeanne (2004). Not only do hurricanes create floods, but they may cause erosion along the banks of rivers and streams.

What is a floodplain?



A floodplain is a low area of land surrounding water bodies (e.g. rivers, streams, lakes, etc.) that may experience occasional or periodic flooding by holding or conveying the additional flow of water during a flood. It includes the floodway, which consists of the stream channel and adjacent areas that carry flood flows, and the flood fringe, which are areas which do not experience a strong current.

Floodplains serve many useful purposes. Among these, floodplain areas convey, hold, and help to filter and disperse floodwaters. Without preservation of these natural floodplains, floodwaters would inundate developed areas. Floodplains that have been preserved in their natural or nearly natural state also provide wildlife habitats enhancing the visual appeal of Orange County.



Is my home in a floodplain?

The Federal Emergency Management Agency (FEMA) has identified areas of the County as being within the 1% annual chance flood (100-year flood). These areas are shown on the Flood Insurance Rate Maps (FIRM). Areas identified as the 1% annual chance flood (100-year flood) have a one percent chance of being equaled or exceeded in a given year. You can use Orange County's online Info Map service to see your property in relation to the existing 1% annual chance flood (100-year flood). You can also contact the Stormwater Management Division at (407) 836-5612 where a technician will help determine whether your property is located within a floodplain.

The various ordinances and building codes of Orange County have special provisions regulating construction and other development within floodplains. Without those provisions, flood insurance through the National Flood Insurance Program (NFIP) would not be available to property owners and renters in Orange County.

Before you build, fill, or otherwise develop in a floodplain, contact the Orange County Public Works Department at (407) 836-7900 to discuss county regulations. Any development in a floodplain without a permit should be reported to the Orange County Building Department at (407) 836-5550.

Do I need flood Insurance?

Your home and its contents may represent your greatest investment. If you are unsure about whether or not you need flood insurance, consider the following:

- Flooding is not covered by a standard homeowner's insurance policy.
- Flood insurance is available in Orange County due to the County's participation in the (NFIP).
- Any walled and roofed building in an NFIP participating community is eligible for flood insurance, whether or not the building is located in a floodplain.
- There is a 30-day waiting period after a policy is purchased before coverage goes into effect. However, if a new or renewal policy is required by a lender as a condition for obtaining a mortgage, then the coverage takes effect at closing. Two types of coverage are available:
 1. Building coverage on walls, floors, insulation, furnace, and items permanently attached to the structure, except where excluded;
 2. Contents coverage for such items as furniture, appliances, and other household goods except where excluded. This coverage must be purchased separately from building coverage.
- Most forms of federal disaster assistance, including FEMA's Temporary Housing and Individual and Family Grant Programs, are only offered if the President declares a major disaster.
90% of disasters are not declared a disaster by the President.

- The most typical form of federal disaster assistance is a Small Business Administration loan that must be paid back with interest. The average duration and loan payment for a disaster home loan is 18.5 years.
- The average Individual and Family Grant is less than \$2,500.
- Floods are the most common natural disaster. 80% of all disasters declared major by the President are floods.
- Buildings in flood hazard areas have a 26% chance of being flooded during a 30-year mortgage.
- Homeowners, business owners, and renters can all purchase flood insurance as long as their community participates in the National Flood Insurance Program. Even if a disaster is not declared by the President, flood insurance claims are paid.
- Flood insurance reimburses you for all covered losses; disaster aid is limited to replacing essential items only.
- Homeowners can get up to \$250,000 of coverage and businesses up to \$500,000. Separate contents coverage also is available.
- Renters can obtain up to \$100,000 of coverage.

More information about flood insurance is available from your insurance agent. Because Orange County participates in the National Flood Insurance Program's Community Rating System, premiums for flood insurance in Orange County are lower than they otherwise would be.

What is required when I apply for a building permit in a floodplain?

A floodplain permit is issued by the Stormwater Management Division to those who want to build a structure or otherwise develop on a property located within a 100-year floodplain. All development in the regulatory floodplain also requires an Elevation Certificate. A copy of the Elevation Certificate form is available online from FEMA or from the Stormwater Management Division at 4200 South John Young Parkway.

Copies of Elevation Certificates that have been submitted in the past are available for review from the Stormwater Management Division during regular business hours. Any development in the floodplain without a permit is illegal; such activity should be reported to the Building Department at 407-836-5550.

What can I do to avoid flooding in my home?



Orange County requires that all new residential structures in the regulatory floodplain be elevated no less than one foot above the base flood elevation. The most effective and permanent means of protecting your structure is to locate it out of the floodplain. If you



are unable to relocate your structure, the next most effective means is to elevate your structure above the base flood elevation.

A few of the steps you can take to protect your home are:

- Keep materials like sandbags, plywood, plastic sheeting and lumber handy for emergencies.
- Make sure that drainage ditches are clear of debris and functioning properly.
- Check with a plumber regarding a valve to prevent sewer backups.
- If you know that a flood is imminent, move valuable contents upstairs or to a safe location.

The Orange County Stormwater Management Division has reference information available for review regarding temporary and permanent property protection, retrofitting, and floodproofing structures.

Debris in drainage ditches, streams, and pipes can cause localized flooding when it rains. Orange County has a maintenance program to keep these conveyance systems clean. However, the County's efforts also depend on your cooperation and assistance. Here is how you can help:

- Do not dump or throw anything into the ditches and streams. Even grass clippings and branches can accumulate and block pipes, ditches, and streams.
- If your property is next to a ditch or stream, please do your part and keep the banks clear of brush and debris.
- For questions, or to report obstructions or violations, call the Public Works Department at 407-863-7900.

What should I do when a storm is coming?

Orange County coordinates with the National Weather Service in issuing public warnings concerning expected floods and storms. Local television and radio stations may announce weather advisories issued by the National Weather Service. These stations may also provide local weather information.

National Weather Service advisories indicate all warnings which are in effect, including a description of the threat and its potential impact. Watches and warnings are issued for gales (winds of 30 to 54 miles per hour), tropical storms (55 to 73 mph), and hurricanes (74 mph or more), as well as for flash floods, coastal flooding, and heavy rains.

A hurricane watch indicates that a hurricane poses a possible threat within 24 to 36 hours. A hurricane warning means that hurricane conditions are expected within 24 hours. You should take action and be prepared.



Hurricanes can cause heavy rains, flash flooding, and abnormally high lake levels. Often the greatest threat during a hurricane is from flooding. Also remember that heavy rains not associated with tropical systems can cause dangerous flooding. You should pay close attention to weather advisories when a storm is expected.

If your home is well constructed and local authorities have not called for evacuation, stay home and make emergency preparations. If told to evacuate, follow all instructions from local authorities and follow safe evacuation routes to a shelter.

Your personal evacuation plan should provide for your pets, your personal hurricane supplies (food, medicine, first aid kit, battery-powered radio, flashlights, extra batteries, etc.) and insurance considerations. When evacuating, take proper identification and important papers and documents with you.

If you are in a public shelter, remain there until informed by those in charge that it is safe to leave and return home. Often people are injured after the storm has passed due to unsafe buildings, downed power lines, contaminated water and other dangerous conditions. Carefully check for structural damage prior to entering a building after a storm. Turn on electricity one breaker at a time and watch for smoke or sparks. Report broken sewer and water mains to your utility company.

Real-time stream gauges are operated by the U.S. Geological Survey (USGS). There are several USGS gauges in Orange County. Real-time data is available at the [USGS Water Resources](#) site online.

What can I do to decrease my risk of injury during a flood?

Residents can take the following actions to decrease the risk of injury due to flooding.

- Do not walk through flowing water. In standing water, use a pole or stick to determine depth. Currents can be deceptive; six inches of moving water can knock you off your feet.
- Do not drive through flooded areas and do not drive around road barriers. Roads or bridges may be washed out.
- Keep children away from flood waters, ditches, culverts, and drains.
- Stay away from power lines and electrical wires. Electric current can travel through water. Report downed power lines to the power company.
- Turn off all electrical circuits at the panel or disconnect all electrical appliances.
- Watch for animals including snakes. Small animals that have been flooded out of their homes may seek shelter in yours.
- Look before you step. After a flood, the ground and floors may be covered with debris, including glass and nails. Floors and stairs that are covered with mud can be very slippery.
- Turn off the gas and be alert for gas leaks. Use a flashlight to inspect for damage. Do not smoke or use candles, lanterns, or open flames unless you know that the gas has been turned off and the area has been ventilated.



I have had flood damage to my home or business. What should I do?

Your home may require rehabilitation or reconstruction after a storm or flood. This rehabilitation or reconstruction may be a partial or complete "gutting" and replacement of internal workings and may or may not include structural changes. If this action is substantial (i.e. over 50 percent of the structure's market value), it is considered new construction and the entire home must meet the same requirements as a new home. Rehabilitations, like additions and repair of damage, represent investment and reinvestment in flood hazard areas, which if not protected, are at serious risk of flooding.

The requirements of the floodplain ordinance and building codes are minimum standards that all development must meet. To increase the safety of your property and reduce insurance premiums, you should consider building to higher standards. Of course, the safest way to develop your property is to locate improvements outside the floodplain.

I still have questions about my property and floodplains. Where can I go?

Certified Floodplain Managers in the Stormwater Management Division can assist you with questions regarding FEMA's mapping effort and floodplain permitting. Also available for review are current and past FEMA Flood Insurance Rate Maps (FIRM), reference materials, pamphlets, and videos. The current FIRM maps are also available for anyone to view on the 3rd floor of the downtown Orange County Public Library.