

FLOOD INFORMATION DIRECTORY

Important Information for City of Vero Beach Residents and Property Owners Regarding Flood, Risk, Insurance, Preparation, Evacuation, Safety and Assistance

If you have any questions concerning this information, please contact the Planning & Development Department or Public Works & Engineering Department at City Hall. (772) 978-5151.

Are You Insured?

For many people, their home and its contents represent their greatest investment. Property losses due to flooding are not covered under most standard homeowner insurance policies. You can protect your home and its contents with flood insurance through the National Flood Insurance Program (NFIP).

The NFIP is a federal program established by Congress in 1968 which enables property owners to buy flood insurance at reasonable rates in participating communities. In return, participating communities carry out flood management measures designed to protect life and property from future flooding.

The NFIP is administered by the Federal Emergency Management Agency through its Federal Insurance Administration. The City of Vero Beach has participated in the NFIP since 1977.

Flood insurance is required in the City of Vero Beach for any federally backed mortgage on a property located within a flood zone. The amounts of flood insurance that are available through the NFIP as of March 1, 1995 are as follows:

<u>Building Type</u>	<u>Available Money</u>
Single family	\$250,000
All other residential	250,000
Non-residential	500,000
<u>Contents</u>	
Residential	100,000
Non-residential	500,000

To find out more about flood insurance for your property and its contents, contact your insurance agent. **There is usually a 30-day waiting period before a flood insurance policy takes effect, so don't wait until a storm threatens before you secure the flood insurance you need.**

Assistance is Available

One of the reasons Vero Beach is recognized for its good floodplain management policies is that the City provides public information regarding flood hazards, flood insurance, and flood protection and mitigation measures designed to correct existing deficiencies in flood-prone construction.

Flood Insurance Rate Maps

The Vero Beach Planning & Development and Public Works & Engineering departments are the community's primary source of information regarding Flood Insurance Rate Maps. Since much of the eastern portion of Vero Beach is in a Special Flood Hazard Area, it is important to know the base flood elevation of any property and the flood insurance purchase requirements, if applicable. Call (772) 978-5151, write, or stop by the Vero Beach Planning & Development or Public Works & Engineering departments at City Hall if you have any questions regarding Flood Insurance Rate Maps or additional information on flood protection assistance.

Flood Reference Library

The Indian River County Main Public Library provides flood protection reference material to the general public. Reference materials include Flood Insurance Rate Maps, state and federal publications covering a variety of subjects, and a list of agencies and individuals to contact for more information. Residents are urged to take advantage of this flood information source.

Flood Safety Measures

City of Vero Beach residents can protect themselves from the flood hazard in our City by taking measures to insure the safety of life and property before, during and after a flood occurs. Safety precautions that can minimize the potential losses in such events include:

Before the storm. Know Indian River County's flood warning procedures. Many of these procedures are outlined in this information with more information available from Indian River County Department of Emergency Services. Plan your evacuation in advance. Know when, where and how you are going to evacuate prior to a storm. Indian River County has posted all primary evacuation routes with blue and white signs. Evacuation time for Vero Beach could take hours. Evacuation from the barrier island may be longer.

Your evacuation plan should provide for your pets, your personal hurricane supplies (food, medicine, etc.) and insurance considerations. If you evacuate, take proper identification and important personal papers and documents along with you. If you live in an area that is particularly vulnerable to flooding, you may want to keep plywood,

plastic sheeting, lumber and other materials in stock to help prepare your property for the storm and to aid in emergency repairs afterwards.

Preparation for evacuation. Keep a battery powered radio tuned in to a local station, and if an evacuation order is given, comply with it. Even if the evacuation order turns out to be unnecessary, leaving the area is better than risking the potential loss of life by staying.

When preparing your home prior to evacuation, it is advisable to turn off all the electricity, with the possible exception of the power to your refrigerator. Also, fill your tubs, sinks and any available containers with water, in case fresh water is not available after the storm. Shut off your water main to prevent any contaminated water from backing up into your house. If possible, board up your windows to protect them from flying debris. Move as many valuables as possible to upper floors or higher elevations. Elevate furniture if possible.

Permanent property protection measures such as structural elevation and flood proofing are non-emergency improvements designed to minimize potential flood damage. Since every structure is unique in its permanent property protection needs, individuals should call professionals in the field of engineering and architecture for assistance.

After the storm. The City will be working as quickly as possible after the storm to insure a speedy and safe return to your homes. Often times more people are injured after a storm due to unsafe buildings, downed power lines, contaminated water and other unsafe conditions than are injured in the storm itself. Carefully check for structural damage prior to entering a building. Use caution when reentering the structure. Turn on electricity one breaker at a time and watch for smoke or sparks. 1) Do not walk through flowing water. Drowning is the number one cause of flood deaths, mostly during flash floods. Currents can be deceptive; six inches of moving water can knock you off your feet. If you walk in standing water, use a pole or stick to ensure that the ground is still there. 2) Do not drive through a flooded area. More people drown in their cars than anywhere else. Don't drive around road barriers; the road or bridge may be washed out. 3) Stay away from power lines and electrical wires. The number two-flood killer after drowning is electrocution. Electrical current can travel through water. Report downed power lines to the power company or city emergency management office.

Persons With Special Needs

The Indian River County Department of Emergency Services works with persons with special needs to provide evacuation assistance. To receive evacuation assistance, persons with special needs may registered with the Department of Emergency Services through their local physician, home healthcare provider, or with the Department directly. Once registered, the name of a person with special needs is placed in a database. When an evacuation order is issued, persons with special needs on the database are notified well in advance so they may be prepared for pick-up and escorted to a safe location. For more information, please contact Indian River County Department of

Emergency Services at (772) 567-8000, extension 535. Don't wait for a storm to strike. Write or call as soon as possible requesting placement into the program, and an application will be sent to you. Request must be made by the individual requiring assistance.

Flood Warning Systems

Flooding in Vero Beach is caused by heavy rainfall that occurs in short periods of time, as is common during summer thunderstorms, and by tidal surges that accompany coastal storms, tropical storms and hurricanes. Hurricane tidal surges are the City's greatest threat, and can cause flooding up to 24 hours before the "eye" of the storm reaches the coast. The table below indicates storm surge levels of various categories of hurricanes.

<u>Category</u>	<u>Wind Speed</u>	<u>Storm Surge</u>
1	74-95 mph	4-5 ft.
2	96-110 mph	6-8 ft.
3	111-130 mph	9-12 ft.
4	131-155 mph	13-18 ft.
5	156+ mpg	19+ ft.

Because of the City's lowland elevations and proximity to the Indian River, the flood threat is significant. Due to this threat, the Federal Emergency Management Agency (FEMA) has identified portions of the City as a Special Flood Hazard Area on the Flood Insurance Rate Maps. These maps establish base flood elevations for development within these areas with the lowest permitted habitable flood levels ranging from 6 to 17 feet above sea level.

The potential for flood losses in Vero Beach always exists when tropical storms and hurricanes hit the area. Even relatively minor storms like Hurricane Erin can result in coastal flooding and property damage. Residents need to respect this hazard and be prepared to deal with it accordingly.

Property Protection

Every year, flooding causes more property damage in the United States than any other type of natural disaster. While recent construction practices and regulations have made new homes less prone to flooding, many existing structures remain susceptible.

Throughout the country, there is a growing interest from property owners to develop practical and cost effective methods for reducing or eliminating exposures to flooding.

Retrofitting is a unique approach to reduce flooding because the property itself remains subject to flooding while the building is modified to prevent or minimize flooding of habitable space.

There are several recognizable approaches to retrofitting:

1. Elevation of the structure above flood protection levels.
2. Construction of barriers (flood walls, berms, etc.)
3. Dry flood proofing (water tight floor and wall systems)
4. Wet flood proofing (constructing the flood prone areas so as to permit the entry and passage of flood waters and removing or relocating items of value to higher elevation levels)

In the event of pending flood threats, it is always advisable to take the following emergency actions:

1. Sand bagging to reduce erosion and scouring
2. Elevate furniture above flood protection levels
3. Create floodway openings in non-habitable areas such as garage doors
4. Seal off sewer lines to the dwelling to prevent the backflow of sewer waters.

Retrofitting/Flood Mitigation - Retrofitting and flood mitigation typically refer to performing floodplain management activities to a land area or a structure after it has been constructed and experienced flooding. Floodplain management means preventive and corrective measures for reducing future flood damage by incorporating enhanced design standards into the initial construction of a structure. Retrofitting or mitigative measures can be taken prior to potential future flooding. A proactive approach to protecting structures and contents from future flood damage is recommended. The following retrofitting and mitigation techniques are the most common.

NON – STRUCTURAL

Elevation – This consists of raising a house on an elevated support foundation, placing it above future floodwaters. Elevation may be considered for all types of homes, such as structures built with a slab-on-grade or other foundation.

Sealants – Sealants, also known as dry flood proofing, can be used only in areas of very shallow flooding to seal a home against water. This technique can only be used on brick veneer or masonry construction in good structural condition because of the tremendous pressures that water can exert. To use this method successfully, flood levels cannot exceed two to three feet with negligible flood velocities. The use of sealants as a non-structural approach to floodplain management by itself will not qualify for lower insurance rates.

Utility Protection – Costly damage to utilities, such as heating, air conditioning, electrical, and plumbing systems can occur during floods. Simple and relatively low-cost measures can usually prevent damage to these systems.

Relocation – Another technique for preventing future flood damage, which is more expensive and time consuming, is relocation and is perhaps the best solution for preventing future flood damage. This method involves moving a structure out of a flood-prone area to a new location where there is little or no threat of flooding. The system for moving a house in good standard condition is well developed.

STRUCTURAL

Levees – The building of levees is possible in areas of shallow and moderate flooding depths with low velocity. Levees create a barrier of compacted soil to keep the water away from a house and can be one of the less expensive methods for protecting a home. Its construction, however, requires great care, and there must be continued attention and maintenance to prevent its failure.

Floodwalls – Sometimes this method is practical for areas with low to moderate flooding depths and velocities. As with levees, floodwalls keep the water away from a house, but are constructed of materials such as masonry block and reinforced concrete. Though more expensive than levees, if properly designed, they do not require as much ongoing maintenance.

Closures – Closures are often used in conjunction with floodwalls and levees. Closures are used for protecting gaps that are left open for daily access, such as walks, doors, and driveways.

Publications and assistance in property protection are available from the City of Vero Beach located at:

City Hall
1053 20th Place
Vero Beach, FL 32960
(772) 978-5151

Floodplain Management

In their undisturbed and natural state, the City's wetlands provide many beneficial functions and resources, including floodplain management, wildlife habitat, and recreational opportunities. In recent years, steps have been taken to preserve wetlands and open space within the City limits.

The City has also adopted a Flood Damage Prevention & Drainage Ordinance, which requires a stormwater drainage plan for new construction. The intent of the ordinance is to reduce flood peaks and duration, provide additional flood storage when needed and

improve and maintain surface and ground water quality. These plans will also have environmental benefits from restoring and enhancing wildlife habitat, and maintaining the diversity and integrity of this unique wetlands system.

Drainage System Maintenance

Over time, the City has improved and maintained a stormwater management system in the City which has reduced the road and yard flooding during the rainy season. Every year the City performs inspection and maintenance of the drainage ditches, catch basins, and culverts that comprise the stormwater drainage system in the City. All facets of the City's drainage system are inspected and maintained at least twice a year to insure this system will function when heavy rain occurs.

Floodplain Management

Keep everything out of storm drains except for rainwater runoff that they are designed to collect. Do not put anything down a storm drain that you would not want to drink or swim in. To report dumping in drainage facilities, contact the city planning and development department at (772) 978-4550.

Permit Requirements

With Vero Beach's participation in the National Flood Insurance Program (NFIP), the City administers flood management regulations and measures designed to minimize the potential of flood losses in the City. Any development in Vero Beach requires a permit from the Building Department. Through this process, the City insures development is taking place according to flood regulations. Regulations include required elevations of living floor areas, flood proofing of certain construction, limitations on placement of fill and prohibitions of certain substantial improvements, additions or reconstruction.

In accordance with NFIP standards, the City of Vero Beach requires that if the cost of any damage reconstruction, rehabilitation, addition or other improvements to a building equals or exceeds 50% of the building's market value, such work is considered a substantial improvement or substantial damage. The existing building is then required to meet the same standards as a new building. For residential structures, these requirements typically mean raising the living area of the building to the base flood elevation.

The City's substantial improvement requirements are enforced through the development and building permitting process. Applicants for remodeling or repair of "non-conforming" structures (i.e. buildings which are not elevated to or above the base flood elevation) are required to submit a cost estimate of the improvement and, if necessary, an appraised value of the existing structure, to determine if the work constitutes a substantial improvement. With these requirements, the City insures that over time, more of the old non-conforming structures in the City will be elevated to the base flood elevation and protected from potential flood damage.

The City's permitting review process may seem cumbersome at times, but is necessary to allow the City to participate in the NFIP, making flood insurance available to any City residents who wish to protect their property from flood damage. Development that occurs without City permits threatens the City's continued participation in the NFIP and the ability for residents to obtain flood insurance. If you see development occurring without permits, protect your rights and contact the City Planning & Deployment Department at 978-4550 immediately.

Radio Stations

WQCS-FM (88.9)	(772) 462-4744
WSCF-FM (91.9)	(772) 569-0919
WZZR-FM (92.7)	(772) 335-9300
WGYL-FM (93.7)	(772) 567-8366
WGYL-AM (1490)	(772) 567-8366
WAVW-FM (101.7)	(772) 567-1055
WBBE-FM (94.7)	(772) 567-1055
WAXE-AM (1370)	(772) 567-1055
WQOL-FM (103.7)	(772) 567-1055

TV Stations

WPTV (NBC) Ch 5	(772) 655-5455
WWCI (INC) Ch 10	(772) 978-0023
WPEC (CBS) Ch 12	1-800-273-9732
WPBF (ABC) Ch 25	(772) 694-2525
Government Access Channel Ch 13 (cable)	(772) 978-4700