

PINELLAS COUNTY'S PARTICIPATION

IN THE

COMMUNITY RATING SYSTEM

Introduction and Purpose

Prior to 1968, flood insurance coverage was virtually unavailable in the private sector. The insurance industry was largely unwilling to underwrite and bear the risk of floods due to its catastrophic nature. Consequently, the Federal Government (Congress) decided to provide coverage through a Federal flood insurance program to help reduce the costs of expensive disaster relief payments.

The Flood Insurance Act of 1968 is the cornerstone of flood hazard mitigation and insurance protection. The passage of the Act was a reaction to a dramatic increase in the number of insurance claims being filed as a result of flood damage. This rise in insurance claims directly corresponded with an escalation of development in areas along beaches, shorelines, waterways, and other water features. Such development occurred and still occurs within Pinellas County. As established by the Act, the Federal Emergency Management Agency (FEMA) is the chief administrative agency for establishing flood mitigation policies and identifying flood-prone areas.

The Federal Emergency Management Agency administers the National Flood Insurance Program (NFIP), which was also established by the Flood Insurance Act of 1968. The NFIP provides property owners the opportunity to purchase federally-backed flood insurance within communities that enter into the program. Property owners who live in participating communities have the opportunity to purchase flood insurance protection for structures and contents. Under the NFIP, FEMA is required to develop flood risk data for use in both insurance rating and floodplain management. Floodplain delineation is based on topography, storm surge modeling, depth to water table, history of flooding, flow obstructions (natural or man-made) and flow accelerators (vegetation versus parking lots and streets). FEMA develops, collects and uses this data to produce a flood insurance study (FIS) specifically for a community. Based on the study, FEMA issues Flood Hazard Boundary Maps (FHBM[s]) and Flood Insurance Rate Maps (FIRM[s]). These maps show the location of Special Flood Hazard Areas (SFHA), flood hazards, floodplains and flood zones. The maps are also used for establishing flood insurance rate premiums.

In order to implement its participation in the National Flood Insurance Program, Pinellas County adopted a flood damage prevention ordinance which requires construction and substantial improvements within flood hazard areas meet certain elevation or floodproofing criteria. An example of this criteria is requiring residential buildings within Flood Insurance Rate Map "V" Zones must be constructed on pilings or columns. Property owners within flood hazard areas and who have federally-subsidized mortgages are required to maintain flood insurance on their structure. In addition, most conventional lenders now require flood insurance for most homes within the 100-

year floodplain, as identified by FEMA. Furthermore, Florida Joint Underwriters Association requires flood insurance prior to the issuance of a homeowner's policy. Not all flood insurance purchases are within a floodplain. Low-cost "preferred risk" policies are offered for property owners and renters located outside floodplain areas.

The National Flood Insurance Program has special provisions for those communities whose floodplain management and public awareness activities go beyond the minimum required by law. The Community Rating System (CRS) was created to provide incentives in the form of reduced insurance premiums to communities that voluntarily adopt and enforce measures exceeding current NFIP criteria to reduce the risk of flood damage. Communities are classified or rated by the number of points awarded for flood hazard and flood damage protection activities performed.

In 1992, Pinellas County submitted an application to participate in the CRS. Credit was and continues to be awarded for adoption of restrictive floodplain development regulations, floodplain information efforts and extensive outreach program. As a result of its efforts, Pinellas County is presently classified as a Class 8 community in the CRS program. This rating enables residents of the unincorporated county who have flood insurance and live in the Special Flood Hazard Area to receive a 10 percent discount on their flood insurance premiums through their insurance agent.

One of the goals of participating in the Community Rating System is to educate and increase awareness about flood hazards, flood mitigation and flood protection in addition to the availability and importance of flood insurance. Additionally, the County specifically encourages those owners of repetitive loss properties (properties that have had more than one insurance claim of \$1,000 or more within any 10 year period since 1978) to take steps to protect their property(ies) from future damage.

Flood Protection

Flooding can be a real hazard depending upon the location within the county. Since 1985, six major storms have hit this region causing flooding and flood damage. These storms created high tides, strong winds and heavy rainfall, resulting in the flooding of many locations within the county. Flooding can occur from the Gulf of Mexico, Tampa Bay or Boca Ciega Bay. These water bodies are not the only source. Lakes, ponds, swales and storm sewer systems can back up and cause street and yard flooding. Many properties are high enough where they did not experience flooding. Pinellas County, however, could be hit someday by a storm causing widespread flooding.

Pinellas County is working to prevent and reduce flood damage. The County has purchased low-lying and flood prone properties. The Public Works and Highway Departments has formalized and increased its storm drainage and maintenance procedures. The Building Department continues to improve and enforce our floodplain and building codes. Flood warning programs are coordinated on a countywide basis. The Pinellas County Comprehensive Emergency Management Plan is periodically updated to meet the needs of our citizenry.

The following ten flood-related topics are provided for information, protection and action against flood hazards. The topics include: Flood Hazard Area, Flood Hazard Mapping, Flood Warning,

Flood Safety, Flood Insurance, Property Protection, Floodplain Development Permit Requirements, Substantial Improvement Requirements, Drainage System Maintenance, and Natural And Beneficial Functions Of The Floodplain.

Flood Hazard Area

Low-lying areas in Pinellas County that are adjacent to creeks, bayous, lakes and the Anclote River are subject to flooding in addition to those areas bordering or near the Gulf of Mexico, Tampa Bay or Boca Ciega Bay. Threatening weather, such as the No-Name Storm in March of 1993, Tropical Storm Josephine in 1996, or even the New Year's Storm of 1999, that occasionally occurs in Pinellas County presents flood hazards to residents due to storm surges, high tides caused by winds, and heavy rainfall. Properties in the floodplain may be vulnerable to flooding from heavy storms and not just from a tropical storm or hurricanes.

The Federal Emergency Management Agency (FEMA) has designated low-lying areas within the County as "Special Flood Hazard Areas". They are typically located in a 100-year floodplain, which is defined as having a 1% chance of being flooded at least once in any given year. If a building is located in a 100-year floodplain, federal law requires that a flood insurance policy be obtained as a condition of a federally-backed mortgage or loan that is secured for the building. The lender has the responsibility to check the Flood Insurance Rate Map (FIRM) to determine if a structure is in the 100-year floodplain. Lenders are legally responsible for determining if a flood insurance policy is required for a loan.

Residents or businesses located in the **unincorporated areas** of Pinellas County should contact the County's Development Review Services, 310 Court Street, Clearwater, Florida 33756 (727/464-3471) to obtain information for determining floodplains according to the FIRM's. Property owners who live in municipalities should contact that city directly.

Flood Hazard Mapping

Pinellas County has a complete set of the Flood Insurance Rate Maps for the entire county for review. Specific questions, however, should be directed to the local jurisdiction in which you live. Residents of the **unincorporated areas** of Pinellas County should contact the County's Development Review Services, 310 Court Street, Clearwater, Florida 33756 (727/464-3471) to obtain floodplain and flood zone information. Property owners who live in municipalities should contact that city directly for map information.

Flood Warning

Pinellas County flood warnings are broadcast by local television (including **Pinellas 18, Your County Connection**) and local radio stations as well as the National Weather Service NOAA Weather Radio. Tune into these media for instructions during times of possible flooding and listen for weather updates, evacuation orders and expected storm arrival times. Evacuation maps are

available from the County's Department of Emergency Management, 400 South Fort Harrison Avenue, Clearwater, Florida 33756 (727/464-3800). Pinellas County residents can also find their evacuation level on line on the World Wide Web at www.pinellascounty.org This can be found on the left hand side of the County's home page, "Check Your Evac Level" or by clicking on "Departments" under Special Interests on the right hand side of the screen and then select "Emergency Management". Choose "Evacuation Level Lookup" on the screen and enter the address.

Flood Safety

Be aware of what steps to take to protect your personal safety:

1. Tune-in to local radio and television stations (**Pinellas 18, "Your County Connection"**) or NOAA Weather Radio for flood warnings and evacuation information.
2. Heed warnings from officials. Evacuate the flood hazard area in times of pending flood or when advised to do so by the Sheriffs, fire department or other governmental official.
3. Don't panic!
4. Know your hurricane evacuation zone.
5. Have an evacuation plan and know what that plan is if you have to evacuate. Know where to evacuate and your evacuation route.
6. Prepare a small bag with essentials.
7. Have battery-operated flashlights, radios and televisions in working condition.
8. Turn off utility services. Cut off all electrical circuits at the fuse panel or disconnect switch. If this is not possible, disconnect all electrical appliances. Shut off the water service and gas valves in your home. Use a flashlight to inspect damage. Do not smoke or use matches, flames, lanterns, or candles unless you know the gas has been shut off and the area has been well ventilated.
9. Do not walk into flooded areas where water depth is unknown. Do not attempt to cross flowing flood waters where the water is above your knees. Currents can be deceptive; six inches of moving water can knock you off your feet. Drowning is the number one cause of flood deaths. Use a pole or stick to ensure that the ground is still there if you walk in standing water.
10. Keep children away from flood water, ditches, culverts and storm drains. Currents can be very strong and flood waters can contain contaminants hazardous to humans.
11. Do not drive into flooded areas where water depth is unknown. If your vehicle stalls in high water, abandon it immediately and seek higher ground. Vehicles can and will float. Currents can whisk vehicles away. Eventually, a floating vehicle will come to rest and sink.
12. Use caution walking inside a flooded structure. During and after a flood, the ground and floors are covered with debris such as broken glass or nails. Mud, silt or sand can be very slippery. Animals, like rodents, insects and snakes, that have been flooded out of their homes may seek shelter in yours. Use a pole or stick to poke or overturn things to scare away small animals.

Flood Insurance

Homeowner insurance policies do not cover losses due to flooding. Just because you may have been spared of any flooding in the past does not mean it cannot happen in the future.

Pinellas County participates in the National Flood Insurance Program (NFIP) which makes all of the property owners in the unincorporated areas of the County eligible to obtain federally-backed flood insurance. Your home and its contents are probably your greatest investment. You can protect yourself from a devastating loss by purchasing flood insurance for your home. This insurance is available to any owner of insurable property (a building and contents) within the unincorporated County through their home insurance agent. Tenants or renters may also insure their personal property against flood loss through an insurance agent. The National Flood Insurance Program requires a 30-day waiting period for “coverage under a new contract for flood insurance” and “any modification to coverage under an existing flood insurance contract”. The intent of the 30-day wait period is to prevent the purchase of flood insurance at times of imminent flood loss. Exceptions to the 30-day wait period are when the purchase is made in conjunction with making, increasing, extension, or renewal of a loan, or pursuant to a Flood Insurance Rate Map revision or update of floodplain areas of flood zones. These exceptions include refinancing, placement of second mortgages, and modifications of existing mortgages. Call your insurance agent now so you will be prepared. Don't wait for a disaster!

Actual costs will vary depending upon the location of your home, amount of coverage and degree of flood hazard. Pinellas County urges persons who live or own property in flood hazard areas to purchase flood insurance to protect themselves from losses due to flooding. This insurance is required in certain instances, such as the purchase of a home with a federally-backed mortgage.

Property Protection

Floodproofing is a way to minimize property loss due to floods. This may involve building walls or levees, elevating or moving structures, or sealing the structure. Moving outdoor furniture indoors and relocating ground floor furniture to upper stories or higher locations will also minimize losses.

Several different methods are available to protect a building from flood damage. Electrical panel boxes, furnaces, water heaters, washers/dryers and furniture (both outdoor and indoor) should be elevated or relocated to a location less likely to be flooded such as upper stories or higher locations. Move valuable contents to higher locations too.

Depending upon your house construction or your ability to modify your house, floor drains may be installed, backflow preventors for water lines may be installed, interior flood walls can be placed around utilities, and plugs, gate valves or standpipes can be installed to prevent sewer back ups. Deeper sewer back up problems can be solved with overhead sewers or backup valves. Other approaches involve making your walls waterproof and placing watertight closures over doorways. Also, keep materials like sandbags, plywood, plastic sheeting and lumber for emergency waterproofing. Another action to help minimize the amount of damage caused by floodwater is to regrade the lot or build a small flood wall or earthen berm.

Many of these approaches to property protection are called floodproofing or retrofitting. More information is available at the East Lake Community Library, and at the Largo, Palm Harbor and Seminole Public Libraries. The Pinellas County Planning Department Library, located at 600 Cleveland Street, Suite 750, Clearwater 33755 (727/464-8200), has information available during regular business hours. County's Building Department, located at 310 Court Street, Clearwater 33756 (727/464-3241) can provide citizens with information on these and other techniques to reduce property loss in addition to reviewing and critiquing floodproofing plans.

Floodplain Development Permit Requirements

All development (new construction, repair/replacement work, additions, signs, fill, etc.) throughout the unincorporated areas of the County requires a permit. Specifically, Pinellas County has adopted regulations on development, construction and reconstruction in floodplains. Construction and reconstruction must follow regulations specific to flood zone construction. Structures are permitted within flood zones provided they meet base flood elevation standards. Elevation Certificates are required for construction within Special Flood Hazard Areas. Existing Elevation Certificates are available for review at the County's Building Department. Please contact the Building Department for further information regarding general information about Elevation Certificates and Elevation Certificates that have been issued for construction.

Permits are also required for altering the ground around a house or on a particular site. The purpose of such regulation is to control the alteration of natural runoffs and storm runoff channels; prevent or regulate construction of flood barriers which divert flood waters or which may increase flood hazards in other areas; restrict or prohibit uses resulting in increased damage by erosion, flood velocities or flood heights; and to control filling, grading or other development that may increase flood damages.

Should you see illegal development in the floodplains, please contact the Building Department located at 310 Court Street, Clearwater 33756 (727/464-3241). Reporting and contacting the Building Department prior to performing work is necessary as the regulations are extensive, and permits are required for construction or improvements in flood zones.

Substantial Improvement Requirements

A substantial improvement to a structure is any construction, rehabilitation, addition or other improvement of a building where the cost of the improvement equals or exceeds 50% of the market value of the building before the start of construction. Substantial improvements must meet the same construction requirements as a new building. Substantially damaged structures must be brought up to the same standards as a new building. Pinellas County enforces the substantial improvement requirement. Contact the Building Department located at 310 Court Street, Clearwater 33756 (727/464-3241) for further information.

Drainage System Maintenance

Pinellas County has a storm drainage system consisting of both open and closed segments. Open segments are the drainage swales, ditches, borrowpits, ponds, lakes, creeks and rivers. The closed sections comprise of storm water inlets and piping which also capture water runoff from streets and developments to drainage collection areas and finally to Boca Ciega Bay, Tampa Bay or the Gulf of Mexico.

Maintenance of these systems is very important. Debris in the open and closed sections of the drainage system obstructs the flow of water causing overflow onto roads and into yards. The partial or complete filling in of these sewer systems by debris reduces the flow capacity thus resulting in the flooding of the streets and yards. Maintenance of the drainage system includes removal of high weeds, yard and grass clippings, branches, litter and debris. Removal of these items is important to the drainage system to maintain a high flow capacity. To achieve this, the Public Works and Highway Departments have standing operating procedures for stormwater system maintenance. County personnel clear and perform maintenance work on specific system locations at least four times per year. Repairs and emergency work are performed on an emergency basis or problematic area as needed. If you see or experience a drainage problem, please contact the County's Highway Department at (727) 464-8900.

Natural And Beneficial Functions Of The Floodplain

Pinellas County uses several approaches to protect its natural floodplain areas in order to prevent alteration of the natural functions of floodplains and to diminish the damaging effects of flood waters. Among these approaches are implementing the goals and policies of the Comprehensive Plan, providing for transfer of development rights, enforcing Land Development Regulations and the site plan review process.

The natural floodplain areas, such as hardwood swamps, cypress swamps, freshwater ponds and marshes, mangrove swamps and salt marshes lessen the effects of storm and flood waters by providing natural storage areas for flood waters and by buffering the coastal areas from storm surges which in turn protects human life and property from flood damage. Natural floodplain areas also provide excellent habitat for diverse wildlife and enhance water quality. Specifically, the values and benefits of floodplains within Pinellas County include:

1. Habitat For Plants And Animals - Mangroves, hardwoods, cypress and other trees and vegetative growth found along natural shorelines provide important resting, feeding and nesting areas for many waterfowl species. These areas have a natural biological diversity and productivity for birds, fish and other wildlife. Along coastlines, mangroves provide an ecosystem that captures nutrients and plant debris which becomes prime nurseries for fish, shrimp, crabs and waterfowl. As an added bonus, the roots protect the shoreline from wind and wave erosion.

2. Water Quality - Vegetation and soils found within the floodplain serve as water filters, intercepting surface water runoff before reaching the Bays. This process aids in the removal of excess nutrients, pollutants and sediments from the water. In turn, the need for costly clean-up from pollutants and sediment removal is reduced. Within the developed areas of the floodplain, stormwater management is provided by pipes, swales, ditches, ponds and lakes that are designed to

clean the stormwater runoff which results in improved water quality entering the Bays.

3. Retention And Creation Of Greenspace - Pinellas County has preserved and created some exciting, unique and beautiful greenspaces within its floodplain. Some examples of green spaces within floodplains includes the Anclote River, Lake Tarpon, Booker Creek, the areas adjacent to the St. Petersburg/Clearwater Airport to south of the Gandy Bridge, Walsingham Park, Lake Seminole, Bay Pines, Sawgrass Lake Park, and Fort Desoto. Each serves multiple uses and purposes. Flood hazard retention, wetland protection, fish and wildlife habitat improvement, outdoor education and recreational opportunities are some of the benefits of these greenspace areas.

Overview Of Retrofitting Methods For Flood Protection

Retrofitting is making changes to an existing structure to protect it from flooding or other hazards such as high winds and earthquakes. Many houses exist today that were built when little was known about where and how often floods and other hazardous events would occur. Also, little was known about how buildings should be protected. Homes being built today and in the future benefit from improvements based on what is learned from destruction from disasters. As a result, retrofitting has become a necessary and important tool in hazard mitigation. The following is an overview of retrofitting methods for flood protection for your home. The retrofitting techniques include: Elevation, Wet Floodproofing, Dry Floodproofing, Levees and Floodwalls, Relocation, and Demolition.

Elevation

This method consists of raising a house on an elevated support structure to place it above future flood waters. The exact method can include a number of possibilities that depend on local conditions such as expected flood and wind forces, building type and size, and soil bearing capacity.

Elevation may be considered for all types of homes, including structures built slab-on-grade or over crawl ways. The types of elevated foundations consist of: Elevation On Extended Foundation Walls, Elevation On Piers, Elevation On Posts Or Columns, Elevation On Pilings, and Elevation On Fill.

Elevation On Extended Foundation Walls - The house is elevated and set on walls that have been built up from the original foundation. This method is particularly appropriate where the characteristics of flooding involve up to moderate depths with slow velocities, and is commonly used.

Elevation On Piers - This method is utilized for shallow flooding with slow to moderate velocities. The house is elevated and set on low foundations that are constructed of reinforced masonry block or reinforced concrete.

Elevation On Posts Or Columns - This method is used for shallow to moderate flood depths with slow to moderate velocities. The house is set on taller structures, generally made of wood, steel or concrete and set in pre-dug holes and braced together.

Elevation On Pilings - This method is employed where high velocity water could undermine other structures such as in coastal high hazard areas. It is also suitable for deep flood depths or poor soil conditions. The house is set on tall foundation pilings, usually wood, that have been driven

into the ground.

Elevation On Fill - This method is limited to areas of low flood depths and low velocities. The house is elevated on compacted soils.

Wet Floodproofing

Wet Floodproofing is modifying the uninhabited portions of the house, such as the crawlspace, to allow flood waters to enter but not significantly damage the house or its contents. The purpose is to allow equal pressure exertion on the interior and exterior of the walls which reduces the likelihood of wall failure and structural damage.

Dry Floodproofing

A structure can be made watertight below the base flood elevation. This method is used only in areas of very shallow flooding which involves sealing the walls with waterproof coatings, impermeable membranes, or supplemental layers of masonry or concrete. All doors, windows and other openings below the base flood elevation must be equipped with permanent or removable shields, and backflow valves installed in sewer lines and drains. Typical masonry and masonry veneer walls can usually withstand pressure exerted by water up to about 3 feet. Deeper flood waters will crack or collapse walls. Typical frame walls can usually withstand pressure exerted by water of less than 3 feet. They are more vulnerable to moisture damage than concrete or masonry walls. As a result, dry floodproofing is not recommended for houses with frame walls.

Levees And Floodwalls

A possible technique in areas of shallow and moderate flood depths with low velocity, this is a method of creating a barrier consisting either compacted soil materials (levee) or masonry block and reinforced concrete block (floodwall). The practical heights for levees and floodwalls are usually limited to 6 feet and 4 feet respectively.

Relocation

Perhaps the only technique for completely preventing future flood damage requires moving a structure out of a flood area to a new location where there is no threat of flooding. Relocation usually involves jacking up a structurally sound building, placing it on a wheeled vehicle and delivering it to a new site.

Demolition

Demolition involves tearing down a damaged house and either rebuilding properly in the same location or somewhere else on the same property. Sometimes demolition without rebuilding is the

best solution to a flooding problem. Depending upon the situation, demolition or relocation in conjunction with moving to another house may be the best alternative. Usually buildings that have sustained extensive damage, especially structural damage, will be torn down. If a new structure is then to be built, it will conform to all the building requirements including those unique to construction within special flood hazard areas.

Other Techniques

Other techniques involve Utility Protection and Special Techniques. Utility Protection is simple methods whereby heating, air conditioning and electrical systems are elevated to prevent damage from flooding. Plumbing systems can also be raised or backflow valves installed. Special Techniques include retrofitting by elevation of fill and elevation on reinforced mat slabs. A very effective method to protect your home and its contents is to raise the level of the major appliances such as clothes washers, dryers, water softeners and water heaters. All appliances should be raised to or above the base flood elevation wherever possible. However, sometimes raising appliances onto an elevated pad to a height of at least six inches may help to prevent floodwaters from reaching the appliances.

For More Information

JURISDICTION	INQUIRY CATEGORY	DEPARTMENT / POSITION RESPONSIBLE	NAME AND TELEPHONE
<p style="text-align: center;">Pinellas County (Unincorporated Areas) www.pinellascounty.org</p>	Flood-Related Programs	Planning Department	David Walker or Michael Taylor, AICP (727) 464-4751
	Construction Permitting, Elevation Certificates and Flood Protection Assistance	Building Department	Robert Nagin (727) 464-3241 or Jack Tipton (727) 464-3241
	Flood Insurance Rate Maps (FIRM's), Flood Zone Map Information and Letters of Map Determination	Development Review Services	Heather Doherty (727) 464-3471
	Evacuation Levels, Flood Warning and Recovery	Emergency Management www.pinellascounty.org	Emergency Management (727) 464-3800
	Letters of Map Revision (LOMR) or Letters of Map Amendment (LOMA)	Public Works Land Permitting Division	Ray Reyburn (727) 464-3261
	Flood Variances	Development Review Services	Al Navaroli (727) 464-3888
	Site Plan Violations	Development Review Services or Environmental Management, Enforcement Division	Steve Davis (727) 464-3888 or Enforcement Division (727) 464-4761

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<p align="center">Pinellas County (Unincorporated Areas) www.co.pinellascounty.org</p>	Drainage and Drainageway Maintenance	Public Works Highway Department	Area Maintenance Supervisor (727) 464-8900
	Floodplain Projects/Programs Beaches/Dunes	Environmental Management	Nicole Elko (727) 464-8900
	Lot Drainage Complaints	Public Works, Highway Department or Development Review Services	Area Maintenance Supervisor (727) 464-8900 or Steve Davis (727) 464-3888
	Development in Floodplains, Watershed Studies	Public Works, Planning & Programming	Surface Water Management Division (727) 464-3756
	Stormwater and Flood Control Projects	Public Works Engineering Division	Paul Hagler (727) 464-3757

Pinellas County continually strives to increase awareness of the hazards of flooding. Federal Emergency Management Agency, Pinellas County, and other agency documents detailing flood hazard information are available in the reference section of the East Lake Community Library in addition to the Largo, Palm Harbor and Seminole Public Libraries. Documents are also available for review during regular business hours, 8am to 5pm, at the Pinellas County Planning Department located at , 600 Cleveland Street, Suite 750, Clearwater, FL 33755 (727/464-8200).