

FLOODPLAIN MANAGEMENT PLAN

INTRODUCTION:

The National Flood Insurance Program (NFIP) provides federally supported flood insurance in communities that regulate development in floodplains. The Community Rating System (CRS) grades the various Community Floodplain Management Programs and reduces flood insurance premiums in those communities that meet certain requirements. In order to reduce the potential for personal/property losses in flood prone areas and ensure the lowest possible flood insurance premiums for our residents, Hillsborough County has developed this Floodplain Management Plan.

BACKGROUND:

Hillsborough County is a coastal county that is affected by storm surge along its coastline and riverine flooding from three rivers: the Alafia, Hillsborough and the Little Manatee. Additionally, certain low-lying inland areas in the northwest, north and southeast are considered flood-prone areas.

The last major storm surge was from the no-name storm in 1993 and Tropical storm Josephine in 1996. The most recent significant fresh water flooding occurred in December 1997, impacting hundreds of homes county wide and resulting in a Federal Disaster Declaration on January 6, 1998. Although no official flooding depth measurements were taken during the events, it has been estimated that storm surge flooding during the no name storm of 1993 caused tidal waters to rise five to six feet above mean high tide. The recent freshwater flooding left some properties in the affected areas three feet underwater.

Base flood elevations have been calculated in the Flood Insurance Study for Hillsborough County and flood zones are published in the Flood Insurance Rate Map dated August, 1992. Coastal flooding caused by tropical storms, hurricanes and unusually high tides combined with strong westerly or northwesterly winds also poses a continuing threat to the County. Storm surge produces most of the flood damage and loss of life associated with storms that make landfall or that closely approach a coastline. Of the hurricane hazards, the storm surge is considered to be the most dangerous since nine out of ten hurricane related deaths are attributed to drowning. The principal tool utilized in assessing the hazard of storm surge is the Sea, Lake and Overland Surges from Hurricane (SLOSH) model. The computerised SLOSH model predicts the tidal surge heights that result from hypothetical hurricanes with selected various combinations of pressure, size, forward speed, track and winds. The SLOSH model, which is utilized locally for hazard and vulnerability analysis, has been digitized into the County's GIS (Geographical Information System) mapping system. Estimated storm surge heights range from four to five feet in a Category 1 storm to in excess of eighteen feet in a Category 5 storm (Saffir-Simpson Hurricane Scale).

ASSESSING THE HAZARDS:

Hillsborough County's primary and most oft occurring hazard is from flooding caused by hurricanes, tropical storms, and subtropical events that are associated with extremely heavy rains. As of 1997, best estimates indicate that there are over 22,000 properties that have flood insurance in the unincorporated areas of the County, an increase from 16,000 in 1992. An analysis of properties located in the flood zones reveals that there are 38,118 properties totally, or in part, located in a flood zone. The improved property value for those sites total in excess of \$3,648,135,657.00. The table below illustrates the number of parcels and improved property value by land use category.

PROPERTIES LOCATED IN FLOOD ZONES BY LAND USE, # OF PROPERTIES AND ASSESSED VALUE

LAND USE BY TYPE	ASSESSED VALUE	# OF PROPERTIES
SINGLE FAMILY	\$2,007,772,111	20,267
MULTI-FAMILY	\$472,754,500	295
MOBILE HOMES	\$23,741,319	2284
MOBILE HOME PARKS	\$11,268,377	190
PUBLIC	\$79,141,158	775
HEALTH CARE	\$34,354,886	12
PRIVATE UTILITIES	\$98,332,639	83
SCHOOLS	\$265,636,694	80
AGRICULTURAL	\$87,301,103	2,999
MINING	\$23,782,626	43
INDUSTRIAL	\$137,824,462	324
COMMERCIAL	\$405,925,732	809

It should be noted that there are a total of 30,267 single or multifamily dwelling units with an assessed value of \$2,007,722,111.00 located in flood zones throughout the county. Additionally, the total of commercial, agricultural and industrial property improvements are in excess of \$630,000,000.00.

PLAN GOALS AND OBJECTIVES:

Goal 1 - Provide leadership in protecting low-income properties and public housing from the impacts of floods.

Create data base to track occurrences and results/actions taken.

Goal 2 - Prevent new development in the floodplain from increasing runoff and resulting increases in flood volumes in the floodplain.

Achieved through LDR s and floodplain certification program.

Goal 3 - Develop a public awareness program that informs all property owners in the flood zones that they are located in a flood zone.

Mailouts - working

Goal 4 - Provide advice and assistance to property owners concerning the protection of their properties from flooding, local drainage and sewer back-up problems.

Committee, Library, Home Shows, Mailouts

Goal 5 - Develop and aggressive program to identify and obtain funding for both pre and post disaster mitigation projects.

Working with grants, working without OMB

Goal 6 - Continue and enhance existing programs that acquire wetland areas for passive recreation uses while providing significant watershed volume storage and buffer areas from the floodplain.

Coordinate with ELAPP and Greenways, SWFWMD, etc.

Goal 7 - Prioritize capital projects that will mitigate flood impacts in those areas of the County that have experienced significant flooding problems.

Working -- Drainage program

Goal 8 - Develop the ability and personnel to review all capital projects in terms of a comprehensive analysis of hazard mitigation opportunities. This activity should include the assignment of a full-time hazard mitigation planner.

Goal 9 - Develop a hazard mitigation plan that will guide and assist the County in reviewing all new requests for development and in establishing priority for hazard mitigation projects.

Goal 10 - Review the effects and locations of areas that experience flooding and determine what steps, if any, the County can take to alleviate future impacts.

REPETITIVE LOSSES:

The unincorporated area of Hillsborough County has been identified as a National Flood Insurance Program category C community by the Federal Emergency Management Agency. A repetitive loss is defined as two (2) or more insurance claims in excess of \$1,000 each for the same property. A category C community is one in which ten (10) or more repetitive losses have occurred in the community. The Federal Emergency Management Agency (FEMA) has listed 45 properties in unincorporated Hillsborough County as repetitive loss properties. Because repetitive loss properties represent approximately one third of the flood insurance claims processed by FEMA, they have made the adoption of a plan to address the specific properties in this classification a mandatory requirement for participation in the Community Rating System (CRS).

The possible activities that could be undertaken to reduce potential flooding to repetitive loss properties must be balance with the rights of the land owners, the ability of the County to finance various activities and the potential benefits of those activities. Considering these variables, the County will undertake the following:

1. The Planning and Growth Management Department will identify repetitive loss properties within the Land and Infrastructure Management System and will monitor these structures closely to ensure they do not receive building permits for significant improvements as defined in the Flood Damage Control Regulations.
2. The Community Rating System Coordinator shall ensure that each repetitive loss property is sent a personal warning letter. At a minimum these letters shall explain that their homes are susceptible to flooding and include information on retrofitting, elevation, relocation and stormwater protection.
3. The Planning and Growth Management Department will inspect all new repetitive loss properties to ascertain the cause of flooding and suggest possible methods to prevent future flooding of these properties.
4. The Community Rating System Coordinator shall request that FEMA annually notify the County of all flood claims processed within the County.
5. The Community Rating System Coordinator shall provide a report to the County Administrator on any emerging patterns of flooding so that these patterns can be used in the decision process for zoning changes and prioritization of capital projects.

ACTION PLAN:

Taking into consideration the existing fiscal constraints experienced by Hillsborough County, and the realization that all floodplain management activity is conducted through the operating budgets of various County departments, the following action plan is designed to serve as a balanced, comprehensive program to mitigate and manage the impact of development activity in the floodplain.

PREVENTION:

Planning and Zoning - Through the regulatory/review activities of the Planning and Growth Management Department, the preservation of open space and the restriction of development in the floodplain will be a priority. The County's Land Development Code (LDC) provides regulations that restrict and manage development activity in the floodplain by limiting wetlands encroachment and preserving open space. This will be primarily accomplished by ensuring limitations on impervious surface and preservation of critical upland habitat and wetland areas.

Stormwater Management - The enforcement of the Land Development Code so that all new development retain and attenuate for its stormwater impacts. Specifically, the Stormwater Technical Manual will continue to be used to regulate all development, whether it is located within or outside of the floodplain. The Stormwater Management Section of the Public Works Department will evaluate each flood event to determine the effectiveness of recently constructed projects and identify potential additional projects or improvements. The County's budget includes funding for the completion of the Stormwater Management Plans for the County's seventeen basins identified in the Stormwater Management Element of the County's Comprehensive Plan.

Drainage System Maintenance - The County will continue to take the appropriate actions to maintain the County's stormwater management systems. The Water Department, through maintenance programs funded by its operating budget, maintains the stormwater conveyance systems to ensure that flooding impacts are minimized.

PROPERTY PROTECTION:

Acquisition - The County will set aside funding and develop a Hazard Mitigation Program that provides for the acquisition of properties that have experienced repetitive losses due to flooding. Through land acquisition purchases by the Environmental Land Acquisition Program, the County shall continue to remove property located in the floodplain from the impacts of development. The continuing impact of this program on flood mitigation is important because the removal of property located in the floodplain and its preservation as passive recreation areas maintains storage capacity and removes floodplain area from potential development. A complimentary benefit is the acquisition of adjacent uplands as open space which further reduces the introduction of impervious surface that can contribute to flooding problems.

Building Elevation - Through the enforcement of the County's Floodplain Ordinance and in conjunction with its participation in the National Flood Insurance Plan's Community Rating

System, structures located in floodplains will continued to be identified for elevation to mitigate for their location in flood prone areas. The County views this activity as a major contribution toward mitigating the impacts of flooding.

Insurance - The County will continue to actively participate in the National Flood Insurance Program. A major contribution to this effort is the recognition that the Community Rating System program be managed by a full-time staff member. To this end, the County is in the process of developing a Hazard Mitigation program staffed full-time. As part of the program, it is recognized that a major emphasis should be placed on the education of those property owners who are located in the floodplain that they should secure flood insurance. Given the fact that FEMA indicates that 22,000 properties in the County participate in the NFIP and that the County s research has indicated that there are over 38,000 parcels located full or in part in the floodplain, success in this area will help to insure that property losses in the floodplain will be covered by insurance.

EMERGENCY SERVICES:

The coordination of emergency services during times of flooding is through the Public Safety Department s Emergency Operations Center.

Flood Warning - When the National Weather Service issues flood watch or warnings, the EOC initiates those activities appropriate to the potential threat of the event.

Flood Response: Through the EOC, the Roads and Streets Department furnishes sand bags to County residents at maintenance stations located throughout the County. If evacuation is deemed necessary, the EOC opens shelters in the affected areas and coordinates the activities of the Sheriff s Office, the Red Cross Emergency Medical services and other agencies as required to accomplish a safe evacuation.

STRUCTURAL PROJECTS:

The County s Stormwater Program was approved by the Board of County Commission in fiscal year 1998. These activities include projects that implement the County s Master Drainage Plan. County staff reviews, evaluates and prioritizes needs so that available funding is allocated to those projects that are most critical in alleviating flood impacts.

Storm Sewers - The County, as part of its Capital Improvements Program continuously provides funding for the reconstruction of obsolete storm sewer systems. This activity includes the replacement of storm pipes, manholes, end walls, culverts and conveyance systems. The CIP also provides funding for individual projects designed to alleviate flooding problems in specific locations in the County.

Retention - Each development, whether private or public, is required to meet the provisions of the Stormwater Technical Manual. Instead of providing reservoirs to store stormwater runoff, each project must provide on-site retention of its runoff and/or tie in to the County's stormwater system. As part of the County's effort to retrofit its stormwater system, funding in the Capital Improvement Program is provided to acquire property and construct stormwater retention facilities to alleviate flooding impacts to roads and private property.

PUBLIC INFORMATION:

The County has undertaken various activities that advise property owners concerning the hazards and potential mitigating activities associated with building in the floodplains.

Map information - Residents, both existing and potential, can access information relating to the floodplains at the Permit Services Center. Floodplain determinations can be requested that provide an official determination of whether a property is located, fully or partially, within a floodplain. Additionally, the County has mapped the floodplains on its Geographical Information System (GIS). The County has also mapped the storm surge from hurricanes based on the SLOSH model.