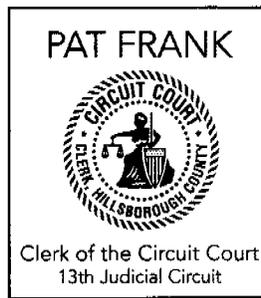


**R10-133**

**RESOLUTION**

**R10-133**



## MEMORANDUM

**DATE:** September 23, 2010

**TO:** Eugene P. Henry, Planning and Growth Management

**FROM:** Julia Poupart, Director, BOCC Records/VAB *Julia Poupart*

**SUBJECT:** Resolution – Approving the Hillsborough County 2010 Updated Floodplain Management Plan and Authorizing its Transmittal to the Federal Emergency Management Agency (FEMA)

---

Attached is an executed original of subject resolution, Resolution R10-133, approved by the Board on September 22, 2010.

We are providing an original to you for further handling.

bam

Attachment

cc: Board files (orig.)  
FEMA via Planning and Growth Management  
Linda Mandell, Planning and Growth Management  
Diane Graves, County Attorney's Office  
Jacqueline Gasper, County Attorney's Office  
Sharon Sweet, BOCC Records



# Agenda Item Cover Sheet

Agenda Item N<sup>o</sup>. B-6

Meeting Date September 22, 2010

Consent Section

Regular Section

Public Hearing

**Subject:**

Approve by resolution the Hillsborough County 2010 Updated Floodplain Management Plan.

Department Name: Planning And Growth Management

Contact Person: Eugene Henry

Contact Phone: 307-4541

**Sign-Off Approvals:**

Lucia Garsys

09/08/2010

Assistant County Administrator

Peter Aluotto

08/31/2010

Department Director

Eric Johnson

09/07/2010

Management and Budget - Approved as to Financial Impact Accuracy

Louis Whitehead

08/31/2010

County Attorney - Approved as to Legal Sufficiency

**Staff's Recommended Board Motion:**

Approve by resolution the Hillsborough County 2010 Updated Floodplain Management Plan and authorize its transmittal to the Federal Emergency Management Agency for rating in accordance with the standards of the Community Rating System of the National Flood Insurance Program.

There is no financial impact to the County. Upon approval by the Federal Emergency Management Agency, the Hillsborough County 2010 Updated Floodplain Management Plan will allow the County to continue its participation in the National Flood Insurance Program's Community Rating System.

**Financial Impact Statement:**

There is no financial impact to the County. Upon approval by the Federal Emergency Management Agency, the Hillsborough County 2010 Updated Floodplain Management Plan will allow the County to continue its participation in the National Flood Insurance Program's Community Rating System.

**Background:**

The accompanying resolution presents a sequence of actions which will culminate in the approval of the Hillsborough County 2010 Updated Floodplain Management Plan.

The 2009 Updated Local Mitigation Strategy ("LMS") was recently approved by the Board on June 16,

R10-133 (2 ORIG)

Higginbotham / White  
7+0

2010. The LMS is an all-hazards mitigation plan which presents a cohesive strategy for building a disaster-resilient community.

On May 26, 1998, the Board approved the County's initial floodplain management plan (the "1998 Floodplain Management Plan"). The LMS (and previous versions thereof) have served and continue to work in tandem with the 1998 Floodplain Management Plan as the County's "Floodplain Management Plan." The Floodplain Management Plan has addressed and continues to address the all-hazards and floodplain management criteria imposed by the Federal Emergency Management Agency ("FEMA") as a condition to the County's participation in FEMA's Community Rating System. The Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Program requirements. The Community Rating System requires the County to address flood-hazard concerns, including repetitive flood losses.

The Community Rating System's required three year update to the Floodplain Management Plan is due. In response, the 1998 Floodplain Management Plan has been updated and designated as the "2010 Floodplain Management Supplement." The 2010 Floodplain Management Supplement shall be incorporated into the Local Mitigation Strategy. The Local Mitigation Strategy, as supplemented by the 2010 Floodplain Management Supplement, shall be designated as the Hillsborough County 2010 Updated Floodplain Management Plan. Upon Board approval, the Hillsborough County 2010 Updated Floodplain Management Plan shall be transmitted to the FEMA for rating in accordance with the standards of the Community Rating System.

FEMA's rating of the Hillsborough County 2010 Updated Floodplain Management Plan is necessary to retain the County's standing within the Community Rating System. The County's performance under the Community Rating System has resulted in Federal flood insurance premium discounts of approximately \$5,500,000 on an annual basis for the holders of policies which insure properties located within unincorporated Hillsborough County.

**List Attachments:**

1. Resolution; 2. 2010 Floodplain Management Supplement; 3. 2009 Updated Local Mitigation Strategy: <http://www.hillsboroughcounty.org/pgm/hazardmit/lm2009.cfm>



# Agenda Item Cover Sheet

 Agenda Item N<sup>o</sup>. \_\_\_\_\_

 Meeting Date September 22, 2010
 Consent Section

 Regular Section

 Public Hearing

<b>Subject:</b> Approve by resolution the Hillsborough County 2010 Updated Floodplain Management Plan.			
<b>Department Name:</b> Planning and Growth Management			
<b>Contact Person:</b> Eugene Henry		<b>Contact Phone:</b> 307-4541	
<b>Sign-Off Approvals:</b>			
Assistant County Administrator _____		Department Director _____	
Date _____		Date _____	
Management and Budget - Approved as to Financial Impact Accuracy _____		County Attorney - Approved as to Legal Sufficiency _____	
Date _____		Date _____	

**Staff's Recommended Board Motion:** Approve by resolution the Hillsborough County 2010 Updated Floodplain Management Plan and authorize its transmittal to the Federal Emergency Management Agency for rating in accordance with the standards of the Community Rating System of the National Flood Insurance Program.

There is no financial impact to the County. Upon approval by the Federal Emergency Management Agency, the Hillsborough County 2010 Updated Floodplain Management Plan will allow the County to continue its participation in the National Flood Insurance Program's Community Rating System.

**Financial Impact Statement:** There is no financial impact to the County. Upon approval by the Federal Emergency Management Agency, the Hillsborough County 2010 Updated Floodplain Management Plan will allow the County to continue its participation in the National Flood Insurance Program's Community Rating System.

**Background:** The accompanying resolution presents a sequence of actions which will culminate in the approval of the Hillsborough County 2010 Updated Floodplain Management Plan.

The 2009 Updated Local Mitigation Strategy ("LMS") was recently approved by the Board on June 16, 2010. The LMS is an all-hazards mitigation plan which presents a cohesive strategy for building a disaster-resilient community.

On May 26, 1998, the Board approved the County's initial floodplain management plan (the "1998 Floodplain Management Plan"). The LMS (and previous versions thereof) have served and continue to work in tandem with the 1998 Floodplain Management Plan as the County's "Floodplain Management Plan." The Floodplain Management Plan has addressed and continues to address the all-hazards and floodplain management criteria imposed by the Federal Emergency Management Agency ("FEMA") as a condition to the County's participation in FEMA's Community Rating System. The Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Program requirements. The Community Rating System requires the County to address flood-hazard concerns, including repetitive flood losses.

The Community Rating System's required three year update to the Floodplain Management Plan is due. In response, the 1998 Floodplain Management Plan has been updated and designated as the "2010 Floodplain Management Supplement." The 2010 Floodplain Management Supplement shall be incorporated into the Local Mitigation Strategy. The Local Mitigation Strategy, as supplemented by the 2010 Floodplain Management Supplement, shall be designated as the Hillsborough County 2010 Updated Floodplain Management Plan. Upon Board approval, the Hillsborough County 2010 Updated Floodplain Management Plan shall be transmitted to the FEMA for rating in accordance with the standards of the Community Rating System.

FEMA's rating of the Hillsborough County 2010 Updated Floodplain Management Plan is necessary to retain the County's standing within the Community Rating System. The County's performance under the Community Rating System has resulted in Federal flood insurance premium discounts of approximately \$5,500,000 on an annual basis for the holders of policies which insure properties located within unincorporated Hillsborough County.

List Attachments: 1. Resolution; 2. 2010 Floodplain Management Supplement; 3. 2009 Updated Local Mitigation Strategy;  
<http://www.hillsboroughcounty.org/pgm/hazardmit/lm2009.cfm>

RESOLUTION NO. R10-133

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF HILLSBOROUGH COUNTY, FLORIDA APPROVING THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT TO THE LOCAL MITIGATION STRATEGY; INCORPORATING THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT INTO THE LOCAL MITIGATION STRATEGY; APPROVING THE LOCAL MITIGATION STRATEGY, AS MODIFIED AND SUPPLEMENTED BY THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT; APPROVING THE LOCAL MITIGATION STRATEGY, AS MODIFIED BY THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT, AS THE 2010 UPDATED FLOODPLAIN MANAGEMENT PLAN; AND, AUTHORIZING THE TRANSMITTAL OF THE 2010 UPDATED FLOODPLAIN MANAGEMENT PLAN TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR RATING IN ACCORDANCE WITH THE STANDARDS OF THE COMMUNITY RATING SYSTEM OF THE NATIONAL FLOOD INSURANCE PROGRAM .

Upon motion by Higginbotham, seconded by White, the following Resolution was approved by a vote of 7 to 0.

WHEREAS, a local mitigation strategy is a comprehensive all-hazards mitigation plan which presents a cohesive strategy for building a disaster-resilient community; and

WHEREAS, Hillsborough County is required to prepare and implement a local mitigation strategy by the Disaster Mitigation Act of 2000, 44 CFR Sec. 201.6(d)(3) and Rule 9G-22 of the Florida Administrative Code; and

WHEREAS, on June 16, 2010, the Board of County Commissioners approved the 2009 Updated County-Wide Local Mitigation Strategy for Hillsborough County (“**Local Mitigation Strategy**”) and forwarded same to the cities of Plant City, Tampa, and Temple Terrace for consideration; and

WHEREAS, the Local Mitigation Strategy represents the annual local mitigation strategy update required by Rule 9G-22 of the Florida Administrative Code and the five year local mitigation strategy update required by 44 CFR Sec. 201.6(d)(3); and

WHEREAS, the Federal Emergency Management Agency (“**FEMA**”) operates the National Flood Insurance Program; and

WHEREAS, the County is a participant in the National Flood Insurance Program’s Community Rating System; and

WHEREAS, the Community Rating System is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum National Flood Insurance Program requirements; and

WHEREAS, the National Flood Insurance Program requires the County to address flood hazard concerns, including repetitive flood losses, as a condition to the County's participation in the Community Rating System; and

WHEREAS, on May 26, 1998, the Board of County Commissioners approved Hillsborough County's initial Floodplain Management Plan (the "**1998 Floodplain Management Plan**"); and

WHEREAS, the Local Mitigation Strategy (and previous versions thereof) have served and continue to serve in tandem with the 1998 Floodplain Management Plan as the County's Floodplain Management Plan ("**Floodplain Management Plan**"); and

WHEREAS, the Floodplain Management Plan has addressed and continues to address the all-hazards and floodplain management criteria imposed by FEMA as a condition to the County's participation in the Community Rating System; and

WHEREAS, the County is nationally ranked among the top three percent (3%) of communities that participate in the voluntary Community Rating System; and

WHEREAS, the County's performance under the Community Rating System has resulted in Federal flood insurance premium discounts of approximately \$5,500,000.00 on an annual basis for the holders of policies which insure properties located within unincorporated Hillsborough County; and

WHEREAS, the Community Rating System's required three year update to the Floodplain Management Plan is due; and

WHEREAS, recent FEMA floodplain management and hazard mitigation criteria promote the incorporation of floodplain management plans into local mitigation strategies; and

WHEREAS, the required update and recent FEMA requirements warrant a floodplain management plan which updates the 1998 Floodplain Management Plan and consolidates the updated 1998 Floodplain Management Plan into the Local Mitigation Strategy; and

WHEREAS, Hillsborough County has updated the 1998 Floodplain Management Plan; and

WHEREAS, said updated 1998 Floodplain Management Plan shall be designated as the "**2010 Floodplain Management Supplement**"; and

WHEREAS, Hillsborough County held public meetings to receive public comment and recommendations on the 2010 Floodplain Management Supplement; and

WHEREAS, Hillsborough County requested input on the 2010 Floodplain Management Supplement from the City of Plant City, the City of Tampa, the City of

Temple Terrace, community interests, stakeholders, and the communitywide Local Mitigation Strategy Working Group; and

WHEREAS, Hillsborough County afforded due consideration to all comments, recommendations and input received in connection with the 2010 Floodplain Management Supplement; and

WHEREAS, the 2010 Floodplain Management Supplement shall be incorporated into and thereby become a part of the Local Mitigation Strategy; and

WHEREAS, the Local Mitigation Strategy, as supplemented by the 2010 Floodplain Management Supplement, shall be the designated as the “*Hillsborough County 2010 Updated Floodplain Management Plan*”; and,

WHEREAS, upon approval by the Board of County Commissioners, the *Hillsborough County 2010 Updated Floodplain Management Plan* shall be forwarded to FEMA for rating in accordance with the standards of the Community Rating System.

NOW, THEREFORE, BE IT RESOLVED, BY THE HILLSBOROUGH COUNTY BOARD OF COUNTY COMMISSIONERS IN A MEETING HELD THIS 22ND DAY OF SEPTEMBER, 2010:

1. That the recitals of fact set forth above are by this reference incorporated into this Resolution.
2. That the 2010 Floodplain Management Supplement is hereby approved.
3. That the 2010 Floodplain Management Supplement is hereby incorporated into and shall become a part of the Local Mitigation Strategy.
4. That the Local Mitigation Strategy, as modified and supplemented by the 2010 Floodplain Management Supplement, is hereby approved.
5. That the Local Mitigation Strategy, as modified and supplemented by the 2010 Floodplain Management Supplement, is hereby deemed and shall henceforth be the *Hillsborough County 2010 Updated Floodplain Management Plan*.
6. That the *Hillsborough County 2010 Updated Floodplain Management Plan* is hereby approved and made a part of this Resolution.
7. That this Resolution and the 2010 Floodplain Management Supplement shall be filed with the Ex-Officio Clerk of the Board of County Commissioners of Hillsborough County, Florida,
8. That copies of this Resolution and the *Hillsborough County 2010 Updated Floodplain Management Plan* shall be forwarded to the Federal Emergency Management

Agency for rating in accordance with the standards of the Community Rating System of the National Flood Insurance Program.

9. That copies of this Resolution and the 2010 Floodplain Management Supplement shall be forwarded to the State of Florida Division of Emergency Management.

10. That copies of this Resolution and the 2010 Floodplain Management Supplement shall be forwarded to the City of Tampa, the City of Temple Terrace, and the City of Plant City.

11. That this Resolution shall take effect immediately upon adoption.

STATE OF FLORIDA

COUNTY OF HILLSBOROUGH

I, Pat Frank, Clerk of the Circuit Court and Ex Officio Clerk of the Board of County Commissioners of Hillsborough County, Florida do hereby certify that the above and foregoing is a true and correct copy of a resolution adopted by the Board at its regular meeting of September 22, 2010, as the same appears in Minute Book 412 of the Public Records of Hillsborough County, Florida.

WITNESS my hand and official seal this 23rd day of September, 2010.

PAT FRANK, CLERK

By: Beverly Anne Miller  
Deputy Clerk



Approved as to form and legal sufficiency

By: [Signature]

## **APPENDIX O**

# **Hillsborough County Hillsborough County 2010 Updated Floodplain Management Plan**

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### ATTACHMENTS

Appendix O,	Attachment 1	Resolution Adopting the Local Mitigation Strategy Adopting
Appendix O,	Attachment 2	Resolution Adopting the Local Mitigation Strategy Supplement
Appendix O,	Attachment 3	Resolution adopting The Post Disaster Redevelopment Plan
Appendix O,	Attachment 4	Board approved Committee Membership
Appendix O,	Attachment 5	Disaster Recovery Committee agendas
Appendix O,	Attachment 6	The Post Disaster Redevelopment Stakeholders Committee
Appendix O,	Attachment 7	Public Workshop Notices
Appendix O,	Attachment 8	Letter to Government Agencies
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Appendix O,	Attachment 19	Special Flood Hazard Area Community Outreach Brochure
Appendix O,	Attachment 20	Ranked Projects
Appendix O,	Attachment 21	AW 510-1-4 Forms

# ATTACHMENTS

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Appendix O, Attachment 20	Ranked Projects
Appendix O, Attachment 21	AW 510-1-4 Forms

Due to the large document size of the attachments, they are not included with this Appendix document. To request a copy of the attachments, contact Hillsborough County Hazard Mitigation at 813-307-4541.

## EXECUTIVE SUMMARY

The Floodplain Management Plan within Hillsborough County is a component of the federally approved all-hazards document adopted by the Board of County Commissioners on June 16, 2010 (LMS Appendix N – adopting resolution), which is specifically named the Hillsborough County Local Mitigation Strategy (LMS), supplemented with LMS Appendix O. The Local Mitigation Strategy as supplemented is intended to meet Federal requirements for all-hazards planning and meet requirements in maintaining a good standing with the National Flood Insurance Program Community Rating System. Additionally, there is a recently adopted plan that compliments the all-hazards countywide process, which is the Hillsborough County Post-Disaster Redevelopment Plan (PDRP). The PDRP was adopted in July 2010, and, together with the LMS, are comprised of floodplain-management activities intended to reduce the vulnerability to hazards (including flooding) and are intended have a forward vision in building disaster resiliency. Additionally, herein-after, the Hillsborough County Floodplain Management Plan is used interchangeable with: Local Mitigation Strategy, Floodplain Management Plan, LMS Supplement, Appendix O, LMS, and FPMP.

The process to address the National Flood Insurance Program Community Rating System (NFIPCRS) was included with the update and re-adoption of the Local Mitigation Strategy (LMS) and with the adoption of the Post-Disaster Redevelopment Plan (PDRP), but is specifically addressed within this document – Appendix O of the LMS. The FPMP is an extension of the County’s mitigation program that was created through public and stakeholder input, which included the use of public meetings to obtain public input in how Hillsborough County may become more resilient to floods.

The FPMP is a document that also serves to show compliance to the NFIPCRS, which requires specific actions in order to reduce the risk of the built environment to the vulnerability within repetitive flood-loss areas. Most importantly to the community, this document provides verification that Hillsborough County remains in compliance with the NFIPCRS. This is accomplished by identifying on the Insurance Service Office activity worksheets (AW 510 1-4 -- review crosswalk) where each credited item may be found within the FPMP. Within this document (supplement to the LMS) and within the LMS, the following items have been included:

- A description of the process used to develop (or update) the plan must be included, either as part of the plan or attached to it
- The following components of floodplain management planning process:
  - Step 1. a description of the plan preparation process
  - Step 4. the hazard assessment
  - Step 5. the problem assessment
  - Step 6. goals of the floodplain management or hazard mitigation program
  - Step 7. the review of possible activities
  - Step 8. the action plan
  - Step 10. how the plan will be periodically evaluated and revised

Additionally, the planning process included the following outreach components to ensure public input and the report does contain documentation showing how the public was involved in preparing or reviewing the plan.

- A list of the members of the planning committee and their affiliations
- A copy of the notice(s) advising residents about the public meeting(s) held pursuant to step 2(b) and (c)
- A record of the meeting(s)
- Correspondence, meeting notes, or other materials that document the coordination with other municipalities, agencies, and organizations credited under Sections 511.a3(b)—(f)

Verification of meeting requirements associated with updating the FPMP are contained within this document. Specific areas to have addressed are listed below; however, Hillsborough County did exceed minimum requirements due to the all-hazard process in which the County was aggressively immersed during the past two years. During this period, the County conducted a great number of meetings included hundreds of cumulative committee hours of time working with mitigation-planning concepts with leadership, stakeholders, and residents (Appendix D and Appendix O, Attachment 9). Although the planning process was inclusive of floodplain management, this document serves to address the specific requirements associated with the NFIPCRS program. Below, the reader will find a summary listing of those required activities needed to have updated the with floodplain management plan within Hillsborough

County. With the listing are page numbers in which the reader may find specific information regarding respective subject headings listed below and pursuant to AW 510-1 through 4.

**FPMP TABLE 1  
FLOODPLAIN MANAGEMENT PLANNING, ISO ACTIVITY 510 AND 511  
CREDITIED POINTS**

	<b>Section/Page</b>
1. Organize to prepare the plan.	
a. Supervision or direction of a professional planner (2)	7
b. Planning committee of department staff (6)	7
c. Process formally created by the community's governing board (2)	9
2. Involve the public.	
a. Planning process conducted through a planning committee (40)	7
b. Public meetings held at the beginning of the planning process (15)	12 and 14
c. Public meeting held on draft plan (15)	14
d. Questionnaires ask the public for information (5)	14
e. Recommendations are solicited from advisory groups, etc. (5)	15
f. Other public information activities to encourage input (5)	14
3. Coordinate with other agencies.	
a. Review of existing studies and plans (required) (3)	2
b. Invited neighboring communities and other agencies (required) (1)	15
c. Contacted communities and NFIP and EM agencies (4)	15
d. NWS, ARC and others are asked how they can help community (4)	15
e. Meetings are held with agencies on mitigation strategies (10)	16
f. Draft action plan sent to agencies for comments (3)	16
4. Assess the hazard.	
a. Plan includes an assessment of the flood hazard (REQUIRED) with:	17
(1) A map of known flood hazards (5)	18
(2) A description of known flood hazard (5)	18
(3) A discussion of past floods (5)	1
b. The plan describes other natural hazards (REQUIRED FOR DMA) (5)	18

**FPMP Table 1, Continued**  
**FLOODPLAIN MANAGEMENT PLANNING, ISO ACTIVITY 510 AND 511**  
**CREDITED POINTS**

5. Assess the problem.	
a. Summary of each hazard identified in the hazard assessment and their community impact (REQUIRED) (2)	19
b. Description of the impact of the hazards on:	
(1) Life, safety, health, procedures for warning and evacuation (5)	18
(2) Critical facilities and infrastructure (5)	18
(3) The community's economy and tax base (5)	19
c. Number and types of buildings subject to the hazards (5)	18
d. Review of all flood insurance claims (4)	18
e. Natural and beneficial functions (4)	19
f. Development, redevelopment, and population trends (5)	19
6. Set goals. (required) (2)	25
7. Review possible activities.	27
a. Preventive activities (5)	34
b. Property protection activities (5)	35
c. Natural resource protection activities (5)	35
d. Emergency services activities (5)	34
e. Structural projects (5)	36
f. Public information activities (5)	35
8. Draft an action plan.	
Actions must be prioritized (required)	
a. Recommendations for activities from two of the six categories (10)	
b. Recommendations for activities from three of the six categories (20)	
c. Recommendations for activities from four of the six categories (30)	
d. Recommendations for activities from five of the six categories (45)	37 and Attachment 20
e. Post-disaster mitigation policies and procedures (10)	30 and Attachment 3
f. Recommendations from Habitat Conservation Plan (10)	31
g. Action items for mitigation of other hazards (5)	31
9. Adopt the plan. (2)	41
10. Implement, evaluate and revise.	
a. Procedures to monitor and recommend revisions (required) (2)	40
b. Same planning committee or successor committee that qualifies under Section 511.a.2 (a) does the evaluation (13)	40

**514 -- Credit Documentation:**

- FMP: The completed CRS activity worksheet (AW-510-1-510-3) or the mitigation plan review crosswalk. Appendix 21.
- A copy of the FPMP, hazard mitigation plan, repetitive loss area analysis, or Habitat Conservation Plan. Attached as Appendix O is the Floodplain Management Plan – the document follows and contains the repetitive loss area analysis, and the Habitat Conservation Plan.
- Documentation showing how the public was involved in preparing or reviewing the plan, including a copy of the notice(s) advising residents about the public meeting(s) held pursuant to steps 2(b) and (c), and a record of the meeting(s). Attachments 7 through 11.
- Documentation showing that the plan was adopted by the community's governing board. Attachment 2

## BACKGROUND

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 the LMS that also serves as the Floodplain Management Plan.

With this understanding, the most repetitive declared disaster in Hillsborough County is flooding. Flooding types in Hillsborough County are inland, riverine and storm surge (Hillsborough County Flood Insurance Study, 2008). The Tampa Bay area is typically affected by inland flooding; however, riverine flooding and flooding from tidal surge is not uncommon. The type of flooding that has occurred within Hillsborough County includes inland flooding, riverine flooding, local drainage and high groundwater, fluctuating lake levels, and tidal surge.

There are greater than 58,000 structures at risk which include mobile homes, manufactured homes, single-family homes, and commercial structures. Approximate 222 structures are designated on the Federal Insurance Agency Repetitive Flood Loss list with the County identifying approximately 15,975 properties adjacent or in repetitive flood-loss areas. Of the 222 reported structures, 21 are listed as severe-repetitive-loss structures and 24 are reported as having been mitigated. Some repetitive flood-loss areas still consist of vacant lots with development potential, but any construction of new homes will be required to meet the Hillsborough County Flood Damage Control Regulations that includes having structures elevated to a design-flood or design-floor elevation (Hillsborough County Land Development Code, 2008; and Hillsborough County Construction Codes, 2007).

Hillsborough County is a coastal county that is affected by storm surge along its coastline and riverine flooding from four principal rivers: the Alafia, the Bull Frog, the Hillsborough, and the Little Manatee. Additionally, certain low-lying inland areas in the northwest, north and southeast are considered flood-prone areas. With respect to severe flooding events, the County has not been affected by such since 2004. However, a minor flooding event did occur on July 1, 2009 due to rainfall. The event was created by a day of isolated thunderstorms that followed a month of higher than expected rainfall. Flooding of streets and several homes occurred within the Hillsborough County Progress Village subdivision. The source of flooding was rainfall, which for this event exceeded the conveyance capacity of the Archie Creek leading from the Progress Village subdivision to the Hillsborough Bay, which is a part of the greater Tampa Bay system. Other than this event, the County has not had a significant flooding event since 2004.

Further history of events is described within the Local Mitigation Strategy, Section III. Specific historical accounts associated with flooding are illustrated and cited in the following:

- Hazards Probability (and Frequency) – Table III.A.1, page III-2 through III-3
- Natural Hazards, Severe Weather Occurrences – Paragraph and Table III.B.1, pages III-5
- Coastal or Riverine Erosion – History of Events, pages III-6 through III-7
- Hurricanes and Tropical Storms – History of Events, pages III-7 through III-10
- Flooding – History of Events, pages III-18 through III-19
- Tsunamis – History of Events, page III-30
- Dam/Levee Failures – History of Events, pages III-33 through III-34

Elevations have been calculated in the Flood Insurance Study for Hillsborough County and flood zones are published in the Flood Insurance study (FIS) and on the Flood Insurance Rate Map dated August 28, 2008. As identified within Section III of the LMS, coastal flooding caused by tropical storms, hurricanes and unusually high tides combined with strong westerly or northwesterly winds also pose a continuing threat to the County. Storm surge has the potential of producing most of the flood damage and loss of life within Hillsborough County. However, both riverine and coastal flooding have caused enormous flooding losses within Hillsborough County during the past. With continued floodplain management program implementation, the community has become more resilient and mostly susceptible to flooding events greater than the one-percent (1%) probability storm event.

## IMPLEMENTATION

Program and planning integration and coordination with other agencies: The aim of floodplain management initiatives is to guide decision-making processes, programs, and land development. This has been accomplished through working with community committees in which membership includes private industry, regional and state agencies, and local citizens. Members include a cross-section of the community, which is shown in FPMP TABLES 5 and 6 of this document (see also the Acknowledgement Page of the LMS, page vii). Committees referenced are: the Local Mitigation Strategy Working Group, the Post-Disaster Redevelopment Stakeholders, and the Disaster Recovery Committee. Pursuant to 9G-22, Florida Administrative Code, the Local Mitigation Strategy Working Group is required to have membership approved by the Board of County Commissioners annually.

Review of existing studies and plans: Plan implementation begins with understanding how various plans are integrated. This process was conducted through the multi-year and document development that included the update to the Floodplain Management Plan. Studies, reports and technical information that included reviewing community needs, goals and plans during the planning process included the following documents, which are also referenced within the Local Mitigation Strategy Appendix B – Evaluation of Existing Programs and Policies and the Local Mitigation Strategy Appendix C – County and Municipal Departments and Their Mitigation Functions. This is a required task associated with the update of the Floodplain Management Plan.

The review process included reviewing the listed documents below, which are Board of County Commissioner approved plans:

- The Future of Hillsborough County (Comprehensive Plan) that is updated pursuant to Florida Statutes once every seven (7) years. The plan is a community guiding document that includes policies that establishes programs or gives guidance for the development of land-development regulations. For floodplain management purposes, the plan addresses, among other items, development within flood-hazard areas, coastal management, development within the Coastal High Hazard Area (CHHA), environmental protection, and limiting higher intensity development within high-risk areas. There is Future Land Use Map Series that contains as a layer flood-hazard areas as identified on the current effective Flood Insurance Rate Map. Maps listed as a part of the Future Land Use Element Map Series are listed on page <http://www.theplanningcommission.org/hillsborough/comprehensiveplan/FLUM> and are identified in the following as well:
  - Future Land Use Map
  - Existing Land Use Map
  - Agriculture and Vacant Lands Map
  - Public Facilities Map
  - Coastal High Hazard Map
  - Natural Systems Map
  - **Floodplain Map** (maps are also available on the web site: <http://www.hillsboroughcounty.org/pgm/hazardmit/floodMap/mapviewer.cfm>)
  - Soils Map
  - Historic Resources Map
  - Transfer of Development Rights Map
  - Activity Centers Map
  - Redevelopment Candidate Map
  - Future Land Use Map - Detailed Plan Areas(With respect to the CHHA, it is defined in Florida Statutes to include the coastal A and AE areas and the area affected by the one-percent probability storm surge inundation area.)
- The Comprehensive Emergency Management Plan (CEMP), which is updated pursuant to Florida Statutes once every five (5) years. The CEMP specifically addresses response/recovery and redevelopment and activities that will be conducted following a disaster to verify flooding in structures and respective damages (<http://www.hillsboroughcounty.org/emergency/resources/publications/cempfinal.pdf>). Specific references to the County's participation with the National Flood Insurance Program (NFIP) are included in the following (excerpts and page numbers are cited):
  - The primary pre-disaster programs are:
    - National Flood Insurance Program

- Community Rating System
- Flood Mitigation Assistance (FMA) Program
- Pre-Disaster Mitigation (PDM) Program
- Local Mitigation Strategy (LMS)
  - Maintain compliance with the Federal Disaster Mitigation Act
  - Save lives and property by reducing vulnerability to natural disasters
  - Receive more post disaster funding more quickly by pre-identifying mitigation projects
  - Save money because the costs of mitigation are less than the costs of recovery and rebuilding
  - Receive funding to meet existing State planning requirements
  - Improve existing county and city partnerships through the sharing of resources
  - Develop a community-wide mitigation plan
  - Develop and implement strategies that strengthen their communities

The LMS is identified within the CEMP as an ongoing process which is managed for the county and municipalities by the County LMS [Working Group] Committee. This [Working Group] will coordinate with the state as required on mitigation matters.

- The plan incorporates activities that are both pre- and post-disaster, but are also inclusive in subject within the Local Mitigation Strategy.
- The Local Mitigation Strategy (LMS) is updated every five years. The Plan serves as the Hillsborough County Floodplain Management Plan (FPMP); whereby, Appendix O is formatted to identify compliance with the National Flood Insurance Program Community Rating System (NFIPCRS). The document identifies local vulnerability to natural hazards, such as flooding and wildfires; assesses risks for all of Hillsborough County, including Tampa, Temple Terrace and Plant City; and details government projects to mitigate or reduce those vulnerabilities. Additionally, the document serves as the Action Plan for the implementation of the Floodplain Management Plan (<http://www.hillsboroughcounty.org/pgm/hazardmit/localmitigation.cfm>).
- Land Development and Construction Codes are updated as required meeting local needs and requirements pursuant to modifications to the growth management act and with the Florida Building Code. Both codes provide the County with enabling legislation for the Hillsborough County Floodplain Administrator, the Flood Damage Control Board, the Flood Damage Control Regulations, Conservation Habitat Environmental regulations, Stormwater Regulations and the Stormwater Technical Manual (requires protection to or greater than the 1% probability event). Principal documents located on the web with search capability are:
  - Construction Code: Principal regulatory document for vertical construction approvals; whereby, the Flood Damage Control Regulations reside -- Chapter 3 (<http://www.hillsboroughcounty.org/pgm/resources/publications/2007hillsboroughcountyconstructioncode.pdf>).
  - Land Development Code: Principal regulatory document for horizontal flood-mitigation, which includes regulations that consist of No Adverse Impact concepts. The principal regulatory section is within Part 3, with concepts similar to many within the Association of State Floodplain Manager's No Adverse Impact manual. Such concepts include clustering, habitat and environmental protection, habitat setbacks, protection of high-risk development areas that includes the Coastal High Hazard Area, mangroves, wetlands, sensitive soils, and riverine areas (<http://library.municode.com/index.aspx?clientId=12399&stateId=9&stateName=Florida>).
- Technical manuals, such as the Stormwater Technical Manual, regulate land-development within Hillsborough County with respect to stormwater retention, attenuation, detention, and conveyance. Regulatory reviews include ensuring peak or volume sensitive basins are correctly developed; whereby, development does not negatively impact stormwater conveyance and/or volume management. Additionally, the review of the Technical Manual provides criteria and procedures for designing stormwater management systems. Criteria include both design criteria and material specifications which shall be adhered to when submitting plans for approval by Hillsborough County (<http://www.hillsboroughcounty.org/pgm/resources/publications/floodmap/stormwatermanagement.pdf>).
- Stormwater Master Plans: Stormwater management concerns all aspects of rain water once it hits the ground. Flooding, pollution of lakes, rivers and streams, as well as planning, designing and constructing stormwater control projects for Hillsborough County, Florida, are part of the County's responsibilities. Said

responsibilities include flooding investigation from local streets to large scale areas around major creek/drainage systems, investigation of sinkhole activities and management of repair, management of large scale watershed studies and updates, as well as stormwater CIP planning, designing and construction to improvements of drainage systems in Hillsborough County. The County also builds projects that improve or construct drainage features, both structural and non-structural, including culverts, drains, ponds, and even wetland restoration projects. With such, the County also performs “Master Planning” of drainage basins in which teams have spent several years studying Hillsborough County and determining problem areas, critical habitats, and projecting future needs. The result is the Watershed Master Plans, which are constantly updated to remain current through a state-of-the-art Geographic Information System (<http://www.hillsboroughcounty.org/publicworks/engineering/stormwater/software.cfm>).

- Habitat Conservation Plan and ELAPP program: The County has an ordinance and an adopted program with respect to habitat conservation and preservation. The regulatory guidance is contained within the LDC, Article 4.01.08 entitled Environmentally Sensitive Areas--Upland providing Significant and Essential Wildlife Habitat. The purpose of the Natural Resources program is to set forth regulations regarding land alteration, the protection of soil and water, the protection of trees and other vegetation, and the protection of environmentally sensitive areas, in order to maintain the quality of life in Hillsborough County and protect the health, safety, welfare and general well being of the citizens of Hillsborough County. The intent is to accomplish the following objectives: promote soil conservation by minimizing and controlling alterations of the natural terrain, and thereby reduce sedimentation and air and surface water pollution resulting from soil erosion; maximize the retention of trees, a valuable natural resource of the community; create an aesthetically pleasing and functional living environment to protect and enhance property values by conserving trees and other vegetation; protect environmentally sensitive areas from activities which would alter their ecological integrity, balance or character; ensure that the activities associated with excavating and the resulting excavation itself do not adversely impact the quantity or quality of surface water or groundwater; ensure that the hauling of excavated material does not adversely impact public roads or bridges or public health, safety or welfare; protect surface water flow by controlling filling activities and changes in drainage patterns; ensure compliance with Chapter 163, Florida Statutes, and the Future of Hillsborough Comprehensive Plan (<http://library.municode.com/index.aspx?clientId=12399&stateId=9&stateName=Florida>). The preservation component is the County’s voter approved Environmental Lands Protection Program; whereby, areas are protected from future development and are maintained to preserve significant habitats (<http://www.hillsboroughcounty.org/parks/conservationservices/elapp/>).
- Floodplain Management Plan: The Local Mitigation strategy was reviewed as well and has been updated. The function of the LMS as the Floodplain Management Plan is required to be updated with each cycle visit pursuant to the Federal Emergency Management Agency’s delegated authority to the CRS FEMA subcontractor, the Insurance Service Office (ISO) – the cycle period is a three year period for Hillsborough County. It also serves as the Hillsborough County all-hazards planning document (<http://www.hillsboroughcounty.org/pgm/hazardmit/lm2009.cfm>).
- Programs: Added programs reviewed, but not included with comments were:
  - The Southwest Florida Water Management Districts Environmental Resource Permitting
  - Public Works Capital Improvements Programs
  - Public Works National Pollutant Discharge Elimination System and Drainage Maintenance

Additionally, the following areas associated with floodplain management and the implementation of the NFIPCRS are ongoing programs within the County that are sanctioned through the Board of County Commissioners on an annual basis through the review and approval of the community budget. Such areas are included in the following table (not an exhaustive list).

**FPMP TABLE 2  
CRS AGENCY INVOLVEMENT WITHIN HILLSBOROUGH COUNTY**

<b>Act. #</b>	<b>Activity Name</b>	<b>Agency</b>
310	Elevation Certificates	Planning and Growth Mgmt
320	Map Information Service	Real Estate
330	Outreach Projects	Planning & Growth Mgmt, Communications, Public works Stormwater
340	Hazard Disclosure	Planning & Growth Mgmt and Emerg. Mgmt
350	Flood Protection Information	Planning and Growth Mgmt
360	Flood Protection Assistance	"
410	Additional Flood Data	"
420	Open Space Preservation	Parks and Conservation & Real Estate
430	Higher Regulatory Standards	Planning and Growth Mgmt
440	Flood Data Maintenance	Planning and Growth Mgmt
450	Stormwater Management	Planning & Growth Mgmt, Public Works Stormwater
510	Floodplain Management Planning	Planning and Growth Mgmt
520	Acquisition and Relocation	"
530	Flood Protection	"
540	Drainage System Maintenance	Public Works
610	Flood Warning Program	Planning & Growth Mgmt and Emerg. Mgmt
630	Dam Safety	Emerg. Mgmt, Water Management District, State, Planning and Growth Mgmt

Review and update exist for respective plans on a periodic schedule as listed above: Plans listed in the aforementioned are required by Federal and State agencies to be maintained. A major review and update exist for respective plans on a periodic schedule as listed above. This update included a review of the County's risks and some modifications to the project list to be better aligned with the state and federal government requirements.

As a side note associated with implementing floodplain management, Hillsborough County mitigation initiatives have received approximately eight (8) million dollars in grants over the past ten years for hazard mitigation projects, which include:

- Acquiring repetitive flood-loss structures
- Acquiring a repetitive flood-loss neighborhood and transforming said area into a regional stormwater system
- Assisting in the elevation of repetitive flood-loss structures
- Placing of signs illustrating the elevation of storm surge in various coastal areas
- Assisting with modeling regulatory floodways with the update of the Flood Insurance Study and Flood Insurance Rate Maps
- Analyzing repetitive flood-loss areas through the assistance of a Flood Mitigation Assistance Grant
- Conducting studies to better understand flooding problems in the County
- Hardening buildings to be wind resistant and some that have been floodproofed

Initiatives, such as those listed above, were identified with the assistance of community input. Community input was obtained through:

- Requesting input such through public advertisement
- Conducting public workshops and meetings

- Conducting regularly scheduled meetings with the Local Mitigation Strategy Working Group
- Community Rating System subcommittee
- Reporting and requesting input through the LMSWG and the Disaster Recovery Committee
- Responding to after-action reports produced following a disaster
- Sending information outlined above for consideration to all jurisdictions within Hillsborough County and to the following counties: Manatee, Pasco, Pinellas, and Polk.

Implementation of floodplain management activities is preformed through a Board approved process and is coordinated in an integrated manner summarized on page 40 of this report. Additionally, respective documents that have been adopted or approved by the Board of County Commissioners to address disaster preparation or response have addressed the County's role in effectively reducing losses to flooding events.

Enabling Legislation. Implementation of flood-protection measures is first established through enabling legislation, which has been done for personal and property protection and for the provision of Federal flood-insurance within unincorporated Hillsborough County. This is accomplished through program regulations as illustrated within the information listed in this section and in which land-development and construction projects are approved to implement protection measures (Land Development Code, Section 9.01.03 and 9.03.03 -- Flood Damage Control Administrator and Flood Damage Control Board). These programs have been cited above as well. In support of the County's establishing-flood control provisions, land-use legislative action and judicial activities of land use within the United State has traditionally and primarily been a function of local government (Handling the Land Use Case, Schnidman, Abrams, and Delaney). Additionally within the review of the law, it is identified that federally enacted environmental laws, such as the Federal Water Pollution Control Act (Clean Water Act), the Clean Air Act, and the National Flood Insurance Program have had an impact on land development and construction. This is of importance to residents within Hillsborough County due to the availability of flood insurance has few sources other than the National Flood Insurance Program, which is a United State's Congressional program that local political leaders adopt regulations that provide a means of meeting federal standards in which a flood-protection program may be implemented. Through the Board of County Commissioners implementing flood-protection measures, the Federal government provides the ability for residents and businesses to obtain Federal flood insurance within unincorporated Hillsborough County.

The National Flood Insurance Program (NFIP) and the federal Coastal Zone Management program are considered by some as an environmental-related program that does affect land-use if a local community and the NFIP does add standards to construction within special-flood and coastal-high hazard areas. The NFIP is the first program that uses the availability of financing as the self-enforcing mechanism to ensure compliance (Handling the Land Use Case, Schnidman, Abrams, and Delaney). The program covers more than 40,000 communities in the United States, of which Hillsborough County is within the top three (3) percent of those communities that participate with the NFIP Community Rating System (NFIPCRS). The program requires the adoption of land-use and construction controls for all construction and major renovations in the flood-hazard area. If a community chooses not to participate in the program, conventional federally-backed financing will not be available for building in flood-hazard areas as designated on Federal Flood Insurance Rate Maps. Through participating in the program, the Board of County Commissioners (for unincorporated Hillsborough County) has enabled the protection of greater than \$10 billion in property protection (FEMA RIV, Insurance . . . , 2010). Through the Board of County Commissioners participation with the program, approximately 60,000 property owners have the availability of Federal flood insurance; otherwise, flood insurance would have to be obtained through a source other than the United States Congress established National Flood Insurance Program.

Pertinent to floodplain management is the fact that floodplain management is enabled and implemented at the community level of government. This is principally accomplished through zoning and land-use regulations. Under such regulatory authority, the Comprehensive Plan is a guiding document in which local regulations are written.

## FLOODPLAIN MANAGEMENT PLAN UPDATE

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.

As identified within the aforementioned, the National Flood Insurance Program Community Rating System (NFIPCRS) provides the ability for the community to have federally supported flood insurance made available in communities that regulate development in floodplains. The Community Rating System is an incentive program within the National Flood Insurance Program that provides communities reductions to Federal flood-insurance rates depending on the level of flood protection a respective community implements. Additionally, when a community has repetitive flood-loss structures, further flood-protection initiatives are required, which includes planning to recognize repetitive flood-loss areas. The planning process that is identified within the following is in direct relationship to the required update to the Hillsborough County Floodplain Management Plan and respective repetitive flood-loss strategy. The community's Floodplain Management Programs does assist in reducing flood losses and flood-insurance premiums.

### **Organize; Prepare the Plan and Coordination with Other Agencies**

Supervision or direction of a professional planner: The team organized to update the County's Floodplain Management Plan (FPMP) was led by a professional planner, Eugene Henry, AICP, CFM (AICP and CFM proof of professional certifications are on file with Hillsborough County). Mr. Henry is certified as Floodplain Manager with the Association of State Floodplain Managers and a member of the American Institute of Certified Planners. As a professional, he has practiced in public and private for more than 25 years and has enjoyed a professional career that has included work with floodplain administration, comprehensive planning, and emergency management. In planning, tasks have included administering programs in areas of hazard mitigation and floodplain management, post-disaster redevelopment planning, permitting and construction, land-use allocation, capital improvements programming and facility management, and large-scale developments. Within emergency management, experience includes working with local governments in implementing a 911-Addressing program, serving on disaster-assessment teams (many were associated with floods), implementing components of a Comprehensive Emergency Management Plan, and serving as professional staff during periods of the local center's activation.

Planning committee of department staff: The initial Floodplain Management Plan (FPMP) was prepared in May 1998 and was a document that was elevated from a departmental-staff level to the Board of County Commissioners; whereby, a public process was used and citizens were provided a limited ability to comment on the development of the plan (Appendix O, Attachment 2). Following the initial adoption of the Hillsborough County FPMP, the County developed an all-hazards document called the Local Mitigation Strategy, which included components of the floodplain management planning process. The plan was initially adopted in 1999 and was subsequently updated in 2004 and 2010. The later versions of the adopted LMS were created to serve as both the all-hazards document to meet requirements associated with the Stafford Act and the Disaster Mitigation Act of 2000; as well as, to serve as the Hillsborough County Floodplain Management Plan. The plan was developed and subsequently updated through an approved committee in which public input was, and remains, sought in the all-hazards planning and mitigation process (Appendix N – June 16, 2010 adopting resolution). The committee that was developed remains with the name “the Local Mitigation Strategy Working Group” (LMSWG), which pursuant to the County's Comprehensive Emergency Management Plan has an oversight committee called the Disaster Recovery Committee (DRC). The LMSWG is a committee in which members are approved on an annual basis by the Board of County Commissioners and pursuant to Florida Statutes (Appendix O, Attachment 4). Additionally, the committee is provided stewardship through the Hillsborough County, Hazard Mitigation section. The Hazard Mitigation section is an agency within the Hillsborough County Planning and Growth Management Department and is an agency in which the Hazard Mitigation Manager, also the Floodplain Administrator (Eugene Henry, AICP, CFM) supervises floodplain management and mitigation activities. To specifically work with the County's FPMP activities, the LMSWG also serves as the Community Rating System (CRS) committee, which is actually a subcommittee of the LMSWG (Appendix M -- past year's committee agendas and meeting minutes, Appendix, Attachment 5).

**FPMP TABLE 3  
CHRONOLOGY OF THE FLOODPLAIN MANAGEMENT PLANNING PROCESS**

YEAR	PLANNING DOCUMENT
1998	Initial Floodplain Management Plan Adopted
1999	Local Mitigation Strategy Adopted
2004 and 2006	Update to the Local Mitigation Strategy, Adopted. The document, used in concert with the FPMP, served to implement Floodplain Management Activities and implement Citizen Corps Council activities.
July 16, 2010	Update to the Local Mitigation Strategy, Adopted. The adopting resolution specifically spells-out the use of the document as the FPMP.
September 22, 2010	Local Mitigation Strategy Amended with Appendix O, Adopted. Appendix O specifically addressed the three-year update to the required FPMP pursuant to the County's participation with the NFIPCRS.

Source: Hillsborough County Planning and Growth Management Department, Hazard Mitigation, 2010.

Involve the public and coordinate with other agencies: In the update to specific functions associated with the FPMP, it was required to have two principal positions lead the implementation of the planning and updated process. The two positions were the Hazard Mitigation Manager and the manager designated as the LMS Coordinator. The two were involved in supervising all phases of the plan update. The LMS Coordinator was the principal team member working with attention in having the LMS updated to be in compliance with requirements under the Federal Emergency Management Agency. However, the update to the LMS included having consideration and input given to components that specifically serve the update of the FPMP as well.

**FPMP Table 4  
COMMUNITY INPUT THROUGH COMMUNITYWIDE COMMITTEES  
CROSS-SECTION OF PUBLIC, BUSINESS, AND GOVERNMENT**

COMMITTEE	UPDATE FUNCTION
<b>Local Mitigation Strategy Working Group</b>	Principal task was to guide the oversight to the Local Mitigation Strategy and to the LMS as the Floodplain Management Plan. Review public input and projects to build resiliency into the community at the present and in the future.
<b>Community Rating System Subcommittee of the LMSWG</b>	Principal task was to review scope that led to the update to the Floodplain Management Plan and review outreach activities to meet community and CRS goals and objectives.
<b>Disaster Recovery Committee</b>	Oversight committee to the Local Mitigation Strategy. The DRC is a cross-section of agencies involved with mitigation, response, recovery, and redevelopment.
<b>Post-Disaster (PD) Redevelopment Plan Stakeholders and PD Recovery Committee</b>	Community committee in which the leadership of the community took the lead in developing actions to address mitigation and long-term post-disaster redevelopment. Adopted actions address pre- and post-disaster periods.

In reviewing the membership of the committees listed above, the following percentages are given to show the cross-section of the community included in the participation in the complete all-hazard planning process.

**FPMP TABLE 5  
COMMUNITY INPUT THROUGH COMMUNITYWIDE COMMITTEES  
COMMITTEE REPRESENTATION**

COMMITTEE	PERCENT REPRESENTATION
<b>Local Mitigation Strategy Working Group (inclusive of the Community Rating System subcommittee)</b>	67% Government 19% Business, Private Industry 14% Citizens
<b>Disaster Recovery Committee</b>	67% Government 14% Business, Private Industry 19% Volunteer Agencies
<b>Post-Disaster Redevelopment Plan Stakeholders/Committee</b>	67% Government 14% Business, Private Industry 19% Volunteer Agencies and Citizens

The Local Mitigation Strategy Working Group is the principal planning committee to the all-hazards planning process within Hillsborough County. This group does bring together those that are most affected by the respective planning process, and as such, the community has received mitigation measures that are realistic and measurable. Additionally, the cross-fertilization of the planning committee has worked well in the leadership of the community recognizes such and has supported the Local Mitigation Strategy planning process since the initial adoption. To illustrate the cross-section of the community, FPMP Table 5 above illustrates such.

Early in the setting the all-hazards and floodplain management planning process, the Hillsborough County Communications Department identified that catastrophic events in the past ten years have changed the way the nation views all-hazards planning, which became evident in looking into the manner Hillsborough County disaster assessment teams supported pre-event mitigation programs and in the manner the County addressed disaster preparedness. As a result, the County has evolved the process in working with committees and stakeholders (includes interested residents) in gaining input with respect to all-hazards planning and building a more resilient community. Lessons remain being learned and resilience can be improved when communities explore disaster and catastrophic planning at enterprise and community levels. These concepts have been included in the “Review of Plan Activities” section of this report.

Process formally created by the community’s local governing body: The planning process in which the update to the Floodplain Management Plan was conducted included working approved processes as identified within the aforementioned and as adopted within the LMS. Defined processes are further identified within the following areas:

1. Local Mitigation Strategy, Section 1— Introduction Mitigation, Heading B – The Local Mitigation Strategy, and Heading C – The Planning Process, pages I – 2 through I – 13. Excerpts from the respective sections follow:

**B. THE LOCAL MITIGATION STRATEGY**

The Local Mitigation Strategy offers innovative approaches for combining funds and coordinating government leadership with the private sector. It is an opportunity for each sector of our community to plan for a safer future. Through these efforts, it is the only avenue to reduce risks from disasters. Mitigation has become a cornerstone to emergency management. It is the ongoing effort to lessen impacts disasters have on people and property. In response to the unacceptable loss of life and property from recent disasters, and the prospect of even greater catastrophic loss in the future, the Local Mitigation Strategy provides a conceptual framework to reduce these losses by breaking the cycle of “disaster event-rebuild-disaster.”

**C. THE PLANNING PROCESS**

At the core of the multi-jurisdictional mitigation planning process for Hillsborough County is coordination and partnership among the governmental units involved in the planning effort – the (unincorporated) County and

the cities of Plant City, Temple Terrace and Tampa. In addition, the planning process relies upon the close involvement of public and private sector organizations and State and federal agencies. In the original design of the LMS, the University of South Florida (USF) provided analysis and review of drafts. Neighboring jurisdictions were invited to meetings and sent drafts for review. Also participating were environmental organizations such as the Southwest Florida Water Management District (SWFWMD); community organizations such as homeowners associations, the Citizen Corps Council (CCC) and Community Emergency Response Team (CERT) organizations. Private organizations such as representatives from the insurance industry, power utility (Tampa Electric) participated and relief organizations such as the American Red Cross serve on the committee.

The update of the LMS document has essentially been an ongoing process since the previous update in 2004. The agendas for the meetings of the LMS Working Group (LMSWG) during the past five years detail many revisions that would be included in this five-year update. Examples include: At the November 8, 2006 meeting, the LMSWG voted to change the mandatory meeting schedule to twice a year. The meetings included subcommittee reports from private/quasi-public groups and non-profit/volunteer groups; updates on continuity planning and critical facilities and infrastructure; training announcements, proposed and completed projects; reports on modifications to the Land Development Code and Comprehensive Plans as they related to mitigation; discussions of available funding and grant application cycles. Additionally, the LMSWG updated the LMS yearly as required by 9G-22. The five-year update as noted in the LMSWG meeting minutes of October 29, 2008 started in October 2008, however, the major re-writing of the plan update began in February 2009. A contractor was not used for this update process.

2. Local Mitigation Strategy, Appendix D – Public and Private Sector Participation Progress Report. An excerpt from the appendix follows:

The Local Mitigation Strategy Working Group adheres to the “Government in the Sunshine Regulations” for open meetings. Consistent with state regulations, the meetings are noticed on the County web site. Prior to consideration by the Board of County Commissioners and the City Councils, at least one public meeting is held to solicit public comment.

All documents are public and made available at the Hillsborough County Planning and Growth Management Department, and the public libraries website [www.Hillsboroughcounty.org/pgm/hazardmit/localmitigation.cfm](http://www.Hillsboroughcounty.org/pgm/hazardmit/localmitigation.cfm) has been developed which introduces the Local Mitigation Strategy, provides an overview of the strategy; a downloadable version of the strategy for public review; the LMS survey and plan adoption activities. This website was advertised in the Hillsborough County Office of Neighborhood Relations July/August 2009 Issue of *the Neighborhood Connection newsletter*. *The newsletter is available online and is emailed out to all 1,000 neighborhood associations presidents registered with Hillsborough County Office of Neighborhood Relations. The newsletter is then disbursed via email to association members.*

The importance of personal mitigation and Local Mitigation Strategy was discussed at town hall meetings; citizens had the opportunity to provide input.

Expos and Neighborhood Conferences are held annually, exhibiting mitigation methods and materials. Several LMS members; planning departments, United Way, and others, helped staff these events.

Since the adoption of the Local Mitigation Strategy in 1998, the County assisted in developing a County Flood Management Plan, which was approved by the Insurance Services Office and FEMA, to satisfy a Community Rating System Requirement. The County conducted several meetings at public libraries and community centers throughout the county to receive citizen input and questions regarding the flood hazard and mitigation opportunities. See Section V for more information on public education and outreach.

Since the adoption of the LMS in 1998, the County has also spearheaded the Flood Mitigation Assistance Program for the unincorporated areas. Meetings were held to inform citizens of the program, the need to take precautionary action to prevent future damages and to receive citizen input. Similar meetings were held in many of the participating NFIP/CRS communities as well.

Hillsborough County participates in a regional public education campaign on the importance of mitigation and preparedness for all types of disasters. The RPC and the County coordinate to produce and distribute brochures, press releases and power point presentations.

Hillsborough County also participates with private sector partners including the utilities, chambers of commerce and economic development agencies in the development and distribution of Business Disaster Planning Kit which features an interactive CDROM, guidebook, template and web site.

3. Post-Disaster Redevelopment Plan, Appendix B – Planning Process. Excerpts of the planning process follows:

Planning Process

The Hillsborough County Post Disaster Redevelopment Plan (PDRP) is a community plan that was developed over the course of an eighteen-month long planning process that took place between May 2008 and November 2009. The planning process served two main functions. The first was to ensure that local knowledge and opinion was reflected in the drafting of the plan. To achieve this, the project was lead by Pat Bean, County Administrator, and input was sought from a wide spectrum of the community including elected officials, county and municipal employees, regional organizations, members of the business community, local nonprofit organizations, and residents. The other function of the planning process was to keep the public informed of the status of the development of the plan through a variety of public outreach methods including a webpage, informational video, and public workshops.

B.1 BOARD OF COUNTY COMMISSIONERS MEETINGS

The Hillsborough County Board of County Commissioners (BOCC) voted to approve the commencement of the post-disaster redevelopment planning process on May 7, 2008. On June 10, 2009, a BOCC workshop was held to present the status of the plan and request approval to move forward with the public policy issues identified over the course of the planning process. At that time, the BOCC unanimously approved the direction of the plan. [In July 2010, the Board of County Commissioners adopted the Post-Disaster Redevelopment Plan.]

B.2 LEADERSHIP AND EXECUTIVE TEAM MEETINGS

In June 2008, a leadership meeting was held to kickoff the PDRP planning effort. Invitees included elected officials, local agency directors, and representatives from regional organizations. This meeting served as an introduction to the County's initiative and the State PDRP Pilot Project for many of the attendees. The agenda included an introduction by County Administrator, Pat Bean, and presentations by Larry Gispert, Emergency Management Director, Sandy Meyer, Florida Department of Community Affairs PDRP Project Manager, and Eugene Henry, Hillsborough County Hazard Mitigation Manager. At the meeting, attendees were asked to be involved in the PDRP Stakeholders Group or to designate staff members to participate. This involvement of the countywide leadership motivated enthusiasm and support for the project early on and contributed to the high level of stakeholder involvement throughout the planning process. In March 2009, the project team met with the Executive Team of the County to update them on the status of the plan and discuss some of the particular long-term post-disaster issues that were identified during the planning process. This meeting was organized as an opportunity for the executive leadership to give feedback about some of the policy recommendations that were being considered for inclusion in the plan and to get their approval on the direction of the planning process at that point.

B.3 PDRP STAKEHOLDERS GROUP

The driving force of the development of the plan was the PDRP Stakeholders Group which was highly active, including over 100 active members [stakeholders full committee membership was greater than 200]. There were two full PDRP Stakeholders Group Meetings; one in July 2008 and one in December 2008. The first meeting served as an introduction to the PDRP and the Stakeholders' role during the planning process. Stakeholders were asked to participate in one of eight Technical Advisory Committees (TACs) to address the following topics: . . .

Recommendations are solicited from advisory groups: As identified within this document in the aforementioned excerpts from the LMS and PDRP and in Tables 5-6, Hillsborough County did solicit information from political leadership, steering committees, and stakeholders. The local political leadership did approve the process that lead to the adoption of the update the Local Mitigation Strategy and a subsequent supplement, which both the adopted document and the supplement serve as the FPMP. As illustrated within the aforementioned, this document was established through communitywide citizen input to improve community resilience through mitigation, pre- and post-disaster response, and recovery (short- and long-term). Committee input was solicited through greater than 200 meetings and more than an aggregate of 2,000 hours of membership work. Many of the meetings were conducted

alongside a consultant to ensure a cross-sector traditional planning process to engage stakeholders in dialogue and determine how information would be compiled and used in the update of the Local Mitigation Strategy both as the all-hazards and floodplain management document, and the Post-Disaster Redevelopment Plan.

These processes have been sanctioned by Board, which is evident in adopted resolutions and agenda items, which are:

- The Local Mitigation Strategy (the CRS Committee is a subcommittee) – LMS Appendix N, and Appendix O, Attachment 4
- The Post Disaster Redevelopment Stakeholders Group and Redevelopment Committee – Appendix E and Appendix O, Attachments 6
- The Local Mitigation Strategy Supplement, Appendix O, Attachment 2

The complete planning process included engaging different community sectors; obtaining consensus on solutions; aligning existing community growth plans; documenting agreements, processes and procedures; looking into changing local ordinance to support plan elements; and implementing a process to ensure the final plan does not become obsolete with time.

Public meetings held at the beginning of the planning process: Meetings were conducted to solicit comment and review draft the draft document in July 2010 and August 2010, and were specifically established to review goals and objectives of the FPMP's and the draft ongoing planning process associated with building resiliency to repetitive flood-losses and flooding events. Additionally, meetings were conducted in an earlier period to review solicit input from the committee, stakeholders, and the community (LMS, Section I and Appendix M; Appendix O, Attachment 4. Public forums were also conducted within areas in which risk were greatest (Appendix O, Attachment 13).

Other public information activities to encourage input: In both the early and later meetings (LMS Section II Appendix N; Appendix O, Attachments 8 through 11), sessions were begun with a participatory presentation (Appendix O, Attachment 16) that explained the process and how goals and objectives were established and anticipated continuance of the process into the next three-year planning cycle. Meetings were established to speak to goals and objectives associated with the NFIPCRS program and repetitive flood-loss areas; whereas, meetings associated with the LMS and PDRP included dialog that was to a greater scope than a single subject risk, such as with flooding.

Additionally, community input was requested during annual meetings with the community that included (Appendix O, Attachment 11):

- Neighborhood Conference
- Hurricane Expo
- Hispanic Outreach Workshops
- State or Florida Insurance Commissioner Public Workshops

**FPMP TABLE 6  
COMMUNITY REPRESENTATION FOR COMMUNITY AND PUBLIC INPUT**

<b>COMMITTEE</b>	<b>COMMITTEE REPRESENTATION</b>	<b>MEMBER COUNT</b>
<b>Local Mitigation Strategy Working Group</b>	<b>Jurisdictions<sup>1</sup></b>	4
	<b>Government</b>	
	Federal	1
	Seminole Nation	1
	State	1
	Regional	3
	Local	29
	<b>Business</b>	
	Major Employers (non government)	3
	Private Business	5
	<b>Public</b>	
	Volunteer Agency	4
	Citizen	2
<b>Post Disaster Redevelopment Plan Stakeholders</b>	<b>Jurisdictions<sup>1</sup></b>	4
	<b>Government</b>	
	Federal	3
	State	4
	Regional	4
	<b>Business</b>	
	Major Employer	10
	Private Business	6
	<b>Public</b>	
	Volunteer Agency	10
	Citizen (Community Association)	1
<b>Disaster Recovery Committee</b>	<b>Jurisdictions<sup>1</sup></b>	4
	<b>Government</b>	
	Federal	3
	State	5
	Regional	2
	<b>Business</b>	
	Major Employers (non government)	3
	<b>Public</b>	
	Volunteer Agency	4
<b>Jurisdictions<sup>1</sup></b>	Refers to local Governments within Hillsborough County, Florida	

Source: Hillsborough County Planning and Growth Management Department, Hazard Mitigation Section, Local Mitigation Strategy, Acknowledgement Page, June 2010; and Post-Disaster Redevelopment Plan, Stakeholder Working Group Acknowledgement Page, July 2010.

Public meeting held at the end of the planning process: The final workshop established for resident input was the review of the draft FPMP that was conducted on September 2, 2010, which was 20 days (greater than two weeks) before the Board of County Commissioners adopted the FPMP. In this meeting the final document was reviewed; whereby, the public and interested parties that did not have an opportunity to participate with past meetings and workshops were given a last opportunity to comment prior to having the document forwarded to the Board of County Commissioners for adopting.

The final meeting was advertised as well as placed on the County calendar providing notice to the public of the time the Board of County Commissioners would adopt the update to the Floodplain Management Plan (Appendix O, Attachments 2).

Several members of the County LMSWG made significant contributions to the plan during its preparation and these members require special mention due to their efforts for the betterment to Hillsborough County. These members participated in all endeavors to master the update to the Local Mitigation Strategy, and are as follows: Linda Mandell, Susan Mueller, Randy Goers, and Kim Ford.

Transparency of all phases of any planning process is a goal and is also a part of the Planning and Growth Management Hazard Mitigation approved public outreach process. It is required of Hillsborough County agencies that conduct outreach programs that a “marketing plan” be created. This is to ensure the County’s Communications Department has the ability to verify that outreach is performed pursuant to an administrative directive with respect to operating procedures in meeting with, and providing notices to, the public. Such a plan has been approved for use in working with residents and for sending notices to residents and property owners with structures within the Special Flood and Coastal High Hazard Areas.

Also with regard to the County’s participation with the NFIPCRS, the CRS grades the various Community floodplain management programs that work to reduce flood insurance premiums. 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, the Board of County Commissioners adopted in 1998 the following document directive: *Develop a public awareness program that informs all property owners in the flood zones that they are located in a flood zone.*

This specific directive is accomplished through a direct mail-out to residents on an annual basis prior, or during, the annual hurricane season. The mail-out is a component of the plan and the community outreach program.

Public meetings held at the beginning of the planning process: Committee members conducted public meetings that provided notices for these meetings and are included in Appendix M – Agenda and Minutes, Appendix O, Attachment 9. Meetings focused on describing the planning process and soliciting public comments on hazard problems and solutions. Meetings addressed solutions that the committee was exploring and gave the public an opportunity to offer comments. Power Point presentations were used to describe the planning process, illustrate hazard problems, review community goals, identify potential mitigation projects and policies, and review public response to the questionnaire (Appendix O, Attachment 16).

Public information activities encouraged: Public notices about the planning process were run on the Hillsborough County Cable Television Public Access Channel, advertised on the County calendar, advertised in the paper (LMS Section 1, Appendix M-- Agenda and Minutes and Appendix O, Attachment 7), and as identified on page 12 of this report.

Questionnaires ask for information: There were two specific questionnaires used in the hazards planning process and a third under the PDRP. The survey used to gain information for the review of floodplain goals and objectives were also referenced in a mail-out, placed on the web, and used during public workshops (Appendix O, Attachment 15 -- Floodplain Management Questionnaire and Survey).

Recommendations are solicited from advisory groups: See LMS, Section I and Appendix M. Additionally, please refer to FPMP Table 6 of this report to view the representation of the community make-up that participated with various parts associated with floodplain management.

Local Mitigation Strategy Working Group (Planning Committee) includes the public: See FPMP Table 6 of this report. Also, refer to See LMS, Section I and Appendices D and M. Additionally, please refer to page 12 of this report. The Local Mitigation Strategy Working Group has members with the distribution as indicated within FPMP Table 5 on page of this report. There are members of the Committee that reside within the Special Flood or Coastal High Hazard Areas.

Planning committee includes other stakeholders (information sought from public): FPMP Table 6 and Appendix O, Attachment 6 of this report shows the distribution and membership of stakeholders (also see the Acknowledgement page and LMS Appendices D and M). Committee membership is shown in LMS page vii – Acknowledgements, LMS Working Group and the LMS Steering Committee; Appendix D – Public-Private Sector Progress Report; and Appendix E – Post-Disaster Redevelopment Plan Stakeholders. Illustrated within these memberships that assisted in the development of the LMS (Floodplain Management Plan) are major community leaders that include: J.P. Morgan, Tampa Electric Company, and Verizon. Other community leaders involved are listed in the LMS Appendix E, and include: Depository Trust Clearing House, Florida Manufacturing Housing Association, Alliance Communications, Bright House Networks, CSX Transportation, University of South Florida, Committee of 100, and many more. Hillsborough County is comprised of greater than 60,000 businesses (Tax Collectors Office, Business Licenses Data). Major employers that participated with one of the committees working with the all-hazard process were well represented and greatly assisted in developing the Local Mitigation Strategy.

Provide documentation that invitations to participate in the planning process were sent to neighboring communities, local agencies involved in hazard mitigation activities and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests: LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report; Appendix O, Attachment 8 -- Letter to Government Agencies.

Provide documentation that neighboring communities, the state NFIP Coordinator, the state water resources agency, the county and state emergency management agency, and the FEMA Regional Office were contacted at the beginning of the planning process: Hillsborough County principally coordinated with the State of Florida Division of Emergency Management (DEM, the NFIP Coordinator is included with the DEM team) and the Federal Emergency Management Agency (FEMA) in the initial communiqués associated with the update LMS. Concurrent coordination through the Post Disaster Redevelopment planning process did include a strong bond and coordination effort with the Tampa Bay Regional Planning Council. A concluding process associated with the adoption of the Floodplain Management Plan included a specific request for comments from the State's NFIP Coordinator, FEMA Region IV, and the Southwest Florida Water Management District. Specific references include: LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report; Appendix O Appendix O, Attachment 8 and Appendix O, Attachment 9, and Appendix O, Attachment 11.

Provide documentation of other governmental and nongovernmental organizations, such as the National Weather Service, Red Cross, homebuilders association, and environmental groups were contacted at the beginning of the planning process: Hillsborough County principally coordinated with volunteer agencies that are a part of the Local Mitigation Strategy Working Group and the Post Disaster Redevelopment Plan Stakeholders. Memberships to these groups are listed in FPMP Table 6 and included the American Red Cross and the United Way of Tampa Bay. References to said groups are also listed within the LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report.

Provide documentation that meetings were held with other agencies and organizations, provide documentation of the meetings including the topics covered: Meetings were conducted with a cross-

fertilization of the community, which is illustrated by reviewing the LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report, Appendix M – Agenda and Minutes; Appendix O, Attachment 10.

Draft action plan was sent to other organizations for review, provide evidence showing the draft action plan was sent to the agencies and organizations contacted under items (b), (c), (d) and (e) and asking them to comment by a certain date: This information is referenced within the preceding paragraphs and is identified within the LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report; Appendix M – Agenda and Minutes , and Appendix O, Attachments 8.

Hillsborough County principally coordinated with the State of Florida Division of Emergency Management (DEM, the NFIP Coordinator is included with the DEM team) and the Federal Emergency Management Agency (FEMA) in the initial communiqués associated with the update to the LMS. Concurrent coordination through the Post Disaster Redevelopment planning process did include a strong bond and coordination effort with the Tampa Bay Regional Planning Council. A concluding process associated with the adoption of the Floodplain Management Plan included a specific request for comments from the State’s NFIP Coordinator, FEMA Region IV, and the Southwest Florida Water Management District.

Other agencies contacted at the beginning of the planning process: The planning process was started with the County as part of a countywide multi-jurisdictional hazard mitigation plan. At that point the process included neighboring communities and coordination was made with the State’s Division of Emergency Management and the FEMA Regional Office. LMS page vii – Acknowledgements; LMS Section I, page 3 through 9; Appendix D – Public and Private Sector Participation Progress Report; Appendix O, Attachment 11.

Review of the community’s needs, goals and plans for the area: A number of local planning efforts were consulted during the mitigation planning process. Plans reviewed are referenced beginning on page 2 of this report and in FPMP Table 3. As identifies within the preceding paragraphs, Hillsborough County did conduct meetings in which input was sought, conduct public workshops for comment and input, and sent letters and emails seeking input and review comments. Also refer to the implementation section of this report.

Draft action plan is sent to agencies for comment: The draft plan was sent to other agencies for comment. Identified within attachment 8 are for copies of letters sending the plan to other agencies asking for comments.

**Assess the Hazard**

There Local Mitigation Strategy has been adopted as the Hillsborough County’s all-hazards; whereby, the community’s vulnerability to hazards is comprehensively reviewed and analyzed. Within the analyses, risks to respective standards in which the population and the built environment are susceptible are documented. Associated with the assessment, mitigation measures in which the community may take measures to reduce risks and build to a more resilient future are listed. Respective sections within the Local Mitigation Strategy in which assessments are performed are listed in the following table:

**FPMP TABLE 7  
LOCAL MITIGATION STRATEGY ALL-HAZARDS ASSESSMENT**

<b>LMS SECTION</b>	<b>PAGE</b>	<b>DESCRIPTION</b>	
III -- Hazards Analysis	III-1	Hazard Analysis, Background	
	III-2	Probability Analysis Matrix	
	III-4	Hazards Vulnerability by Jurisdiction	
	III-5, 6-12, 17-20, 33	Analysis of Natural Hazards (including Flooding)	
	III-38	Hazard Vulnerability Maps that include: Stormsurge, NFIP Zones, RF Loss Areas, Tsunami,	
IV -- Assessing Vulnerability and Risks, Value Assessment	IV-1	Risk Analysis that includes: Flooding, Hurricanes, Tropical Storms, Tsunami, Coastal & Riverine, Dam/Levee Failure	
	IV-3-27	Hurricanes, includes values et al listed by storm event	
	IV-28-32	Flooding by NFIP Zone	
	IV-39-55	Tropical Storm, includes values et al listed by storm event	
	IV-56	Tsunami	
	IV -- Assessing Vulnerability and Risks, Analysis Description	IV-60-69	Model Description
	IV -- Assessment Vulnerability	IV-70-74	Land-use assessment by area of susceptibility
IV -- Multi-Hazards Mapping System	IV-75-88	Critical Facilities and Regional Lifelines	
	IV-76-83	Hurricane Economic Loss Model	
	IV-88	Attachment C: Critical Facilities	
IV -- Risk Assessment	IV-83-87	Probability of Occurrence, Consequence, Risk Factor, Mitigation Techniques, and Potential Loss by areas of Vulnerability	
V -- The LMS Mitigation Blueprint	V-1	Evaluation of Existing Authorities, Policies, and Resources	
	V-8	NFIP, Policy Information: Policies in Force and Value	
	V-9	Repetitive Flood-Loss Initiative, Buildings Affected	
	V-10	Repetitive Flood-Loss Figures: Repetitive Flood-Loss Area Map and Structures	

Source: Hillsborough County Local Mitigation Strategy, 2010.

Plan includes a map and flood hazard description: The flood hazard area is presented as an overlay on the county’s Future Land Use Map Series, which is cited on page 2 of this report with a web link to view the map from the Hillsborough County Planning Commission. The flood hazard discussion and map covers all of the flood problems in the county. Flood events are discussed in Section III, LMS. The plan reviews repetitive-loss properties and such areas are reviewed in-depth within said section and are also referenced within the LMS, Appendix L. Additionally,

repetitive flood-loss activities are also mentioned within this document beginning on page 20 and again listed on page 30.

The Plan includes other natural hazards: The plan addresses floods, hurricanes, coastal erosion, tornadoes, and several other natural and man-made hazards. This may be reviewed within Sections III and IV of the LMS.

Summary of each hazard is identified in the hazard assessment along with a community impact: Section III provides a summary of each natural hazard and its impact on the community. Section IV of the LMS includes tables on the number and value of structures by hazard zone and includes the acreage of vacant land by respective area. Additionally, Section IV does provide a community economic assessment. For other hazards the impact assessment is based on the effects of past events or on an assessment based on state or national assessment standards.

Description of the impact of hazards on life, safety and health: The impact of hazards on life, safety and demographics is addressed in Section II – Profile of Hillsborough County (demographics) and Section IV – Assessing Vulnerability and Risks (population at risk). Additionally, the vulnerability assessment in Section IV considers such factors in estimating the level of impact hazards may have on the community. The Local Mitigation Strategy Working Group’s findings include consideration given to hazard vulnerabilities.

Impacts hazards will have on critical facilities: Section IV-76 – Critical Facilities and Lifelines are discussed within the LMS Section IV (beginning on page 75) and the plan provides an inventory of said facilities, but such is not published (LMS Appendix K) with maps due to the sensitivity of critical facilities. Information is shown in a general format beginning on page IV 88. Consideration of how the identified hazards will impact critical facilities is addressed within this respective section. Plans for protecting critical facilities are illustrated on the task list, which is the LMS Appendix G. Emergency plans for priority 1 facilities are referenced within respective operating agencies, which amount to 2,500 different critical facilities. Additionally, the LMS Working Group is working to have respective facilities placed into a management program named Risk Analysis Center (RAC); which will provide a greater capability in assessing a facility and the type of need for further protection if needed.

Number and types of buildings subject to hazards: Section IV, page IV-1 begins the discussion regarding impacted structure type by type of hazard. Beginning on page IV-63 is the discussion regarding estimated structures exposed to hazards. Beginning on page IV-65 is the discussion regarding existing and future land-use designations with respect to the vulnerability of the built environment based on risks within various areas of the county. Additionally, specific land-use designations with the number of total and vacant acreage are identified.

Review of all flood insurance claims: All flood insurance claims were reviewed during the preparation of the plan. This data was used to develop mitigation recommendations. Specific Federal flood-insurance information is reviewed and referenced within the LMS, Section V, pages V-8 through V-9 (also Section III-17). Augmenting this information is the FPMP table below and in Appendix O, Attachment 14, Federal Flood Insurance Claim Information.

FPMP TABLE 8  
SUMMARY HISTORICAL FEDERAL FLOOD INSURANCE CLAIMS AND PAYOUTS

YEAR	CLAIMS	PAYMENT FOR BULILDINGS	PAYMENT FOR CONTENTS	PAYMENT FOR INCREASED COST OF COMPLIANCE
2004	303	\$4,638,861.23	\$1,305,315.45	\$72,402.50
2005	5	\$129,220.55	\$2,828.42	\$0.00
2006	13	\$148,101.71	\$43,049.95	\$0.00
2007	3	\$5,370.46	\$11,551.71	\$0.00
2008	8	\$73,258.14	\$9,798.96	\$0.00
2009	15	\$154,551.70	\$95,010.57	\$0.00

Source: Federal Emergency Management Agency, 2010

Natural and beneficial functions: The natural and beneficial functions of inland, riverine, and coastal waters are addressed within the Habitat Conservation Plan section of this report, which is referenced on pages 4 and 24 of this report. Natural beneficial functions are components of the planning processes that are incorporated within the Land Development Code, the Construction Code, and the County's Environmental Lands Program. Additionally, the LMS Appendices B and C, illustrate regulations that have been reviewed that serve to maintain natural and beneficial functions.

Development, redevelopment, and population trends: Demographics and development trends are identified within the LMS Sections III and IV. Land use, both built and vacant, has also been identified with respect to areas of vulnerability.

Summary of impacts to the community: Potential impacts are discussed within the Assessing Vulnerability and Risk Section of the LMS, Section IV, beginning on page IV-1. Additionally, an economic analysis was performed to illustrate impacts of having the built environment within areas susceptible to various risks. The economic analysis is reviewed beginning on page 76 of the LMS, Section IV. The full report is a section within the adopted Post-Disaster Redevelopment Plan. The major impacts are summarized on Section 2.6 on pages 2-44 and 2-45.

### **Repetitive Loss Area Analysis**

The LMS Coordinator of the Hazard Mitigation team implements repetitive flood-loss components of the FPMP on an annual basis. This serves to review the number of repetitive flood-loss structures and identify if modifications have been performed to the list and to identify if further flood resiliency may be made within the community through acquisitions of lots within repetitive flood-loss areas and through assisting property owners of repetitive flood-loss structures obtain grants to rebuild a respective structure to meet design-flood elevation requirements (plus two additional feet of freeboard). An analysis of the repetitive flood-loss areas is identified within the Risk Assessment section of the Local Mitigation Strategy and within the Flood Mitigation Assistance (FMA) grant document. County's risk to repetitive flood-losses is included updates to the ensure preparation.

All repetitive loss areas are mapped: Repetitive flood-loss properties are identified in Attachment 17 of this report and in the LMS, Section V, page V-10. Addresses for this information are protected pursuant to Federal code; and as such, the list is available to authorized persons by visiting the Hazard Mitigation Section of the Hillsborough County Planning and Growth Management Department. Additionally, the County maintains a Repetitive Flood-Loss Areas map, which is identified within the LMS, Section V, maps begin on page V-38, and in Appendix O, Attachment 17. Flood Hazard Maps are also identified on the Hillsborough County web and in the map series within the LMS, Section V, with maps beginning on page V-38.

Repetitive Flood-Loss Areas and Flood Mitigation Assistance Analyses: The County did receive a Flood Mitigation Assistance (FMA) grant during the early 2000s. During this period, an analysis was also performed through the County's stormwater section of conditions throughout unincorporated county in which flooding may have an affect to life and property. Studies are maintained by the Hillsborough County Public Works Stormwater Section and are available for review. In addition to the referenced flood-mitigation assessment, the County's detailed 17 Watershed Master Plans analyses did considered the respective information in the analysis:

- Data collected on areas and buildings with information noted with respect to any repetitive flooding issues. As a note, the repetitive flood-loss areas map is in part a product from Watershed Master Plans and the FMA study.
- Identifying alternative mitigation techniques was a principal component of the Watershed Master Plan planning process, which remains current through continued studies and updates (Appendix O, Attachment 12, Head of appropriate agency approved analysis and sample of Minutes).
- The Master Plan process was also used to determine whether drainage improvements are feasible within areas know for stormater and repetitive flooding issues. Such was also used to determine costs for alternatives.
- Agencies or organizations (such as with the cities) were contacted to verify if other plans were available that may have affected the analysis: Where appropriate, the Watershed Mater Plan process sought input from adjacent cities. Additionally, the Southwest Florida Water Management District assisted in the review of information and the Public Works Department remains in contact with respect to any input. Current updates are progressing, and alternatives remain valid.

- Documented findings with maps are located in the Public Works Stormwater Section. Additionally, the web site does provide the model that was used and modeled information may be retrieved from the Hillsborough County FTP site. This information was used to update the Hillsborough County Flood Insurance Rate Maps and updates are used in obtaining Letters of Map Change and Revisions based upon better data when it is received. Because of the volume of information associated with the Master Plans, said plans and information have not been included; however, said information has been approved through the Board of County Commissioners and/or FEMA and may be provided upon a request through the Manager of the Stormwater Section or the CRS Coordinator (reference is on file).
- Property Owners that were advised of analysis: When the process was underway, property owners were invited to workshops and any areas affected by infrastructure improvements based on findings from the Stormwater Master Plan planning process were provided the opportunity to comment. Additionally, residents are notified if any modifications to made to base-flood elevations or any modifications are needed to the Flood Insurance Study or the Flood Insurance Rate Map.

As a note, there is not a process within Hillsborough County that seeks to augment the Stormwater Mater Plan or plan update process; because, said process analyzes areas for stormwater and repetitive flood-loss issues and provides opportunities for the public and entities affected time to comment and respond to alternatives.

**Memorandum or other documentation showing the head of appropriate agency has approved the analysis (Attachment 12):**

If the community did conduct analyses of repetitive loss areas during the initial Master Plan development: The information was not updated for this process; however, the County is performing updates of all Master Plans. As data is modified using an approved FEMA model, request are made to FEMA through the Letter of Map Change or Map Revision process to modify the Flood Insurance Rate Map.

- The number of buildings in the repetitive flood-loss areas where the analyses have been completed – the analysis was for the full unincorporated area.
- The number of buildings on all the community’s repetitive loss areas – the current count of structures within repetitive flood-loss areas is 15, 900. These areas are identified in Section III of the LMS.

**Floodplain Management Plan (and Repetitive Loss) Annual Progress -- Activity 510**

Annual recertification: The annual certification is identified, beginning on, page 20 of this report, and within the LMS, Sections I, page I-11; Section V, beginning on page V-11. The adopted annual Community Rating System outreach is also identified within this report beginning on page 37 and within Section V-14. References made of this report does list accomplishments associated in the implementation of the Floodplain Management Plan. These items serve as a minimum outreach tasks and are anticipated to be addressed similarly each annual period for the next cycle period.

The FPMP Resolution is anticipated to be adopted on September 22, 2010 and will serve to instruct the Local Mitigation Strategy Working Group to continue monitoring implementation of the FPMP. Staff will prepare a written progress report to the Board of County Commissioners each year.

Progress report: The progress report was prepared by the Floodplain Administrator and CRS Coordinator. For credit under the Community Rating System, this information has been provided at a public meeting and has been made available to the media and the public. Copies of this report, the Local Mitigation Strategy (as the Floodplain Management Plan) are available for review through the Hillsborough County Planning and Growth Management Department, Hazard Mitigation Section, 601 East Kennedy Boulevard, Tampa, Florida 33602. Additionally, this report (as Appendix O of the LMS) and the Local Mitigation Strategy (as the Floodplain Management Plan) are availability on the Hillsborough County website.

This report is prepared for submittal for continued credit under the National Flood Insurance Program Community Rating System (NFIPCRS). It is designed to provide a short update and report on accomplishments toward implementing the County’s Floodplain Management Plan (and Repetitive Flood Loss Plan). Copies of this report have been distributed for dissemination and forwarded to the Board of County Commissioners. Additionally, this

report, following adoption, will be submitted to the State and Federal Emergency Management agencies as part the County's annual CRS recertification.

1. Name of the Floodplain Management Plan: Hillsborough County Local Mitigation Strategy and Floodplain Management Plan.
2. Date Adopted: The initial adoption of the Floodplain Management Plan was adopted in May 1998, and subsequently with updates to the Local Mitigation Strategy in 2004, 2006, and 2010, and as amended through the adoption of Appendix O as the Supplement to the LMS scheduled on September 22, 2010. The all-hazards document (Local Mitigation Strategy) has been reviewed and approved for content by the State of Florida and the Federal Emergency Management Agency (FEMA). The LMS was initially adopted in 1999 by the Board of County Commissioners. The County completed a major map modernization activity as a Cooperating Technical Partner with FEMA and replaced current effective maps on August 28, 2008 with a countywide Digital Flood Insurance Rate Map (DFIRM).
3. Location where copies are available for review: Hillsborough County Planning and Growth Management Department, Hazard Mitigation Section, 601 East Kennedy Boulevard, Tampa, Florida 33602.
4. Summary of any floods that occurred during the year: There has not been any significant flooding within Hillsborough County since 2004 – refer to Background Section of this report, page 1. During the period of October 1, 2007 to September 20, 2008, the County had no significant flooding of structures or repetitive flood-loss areas. There were minor damages to a commercial apartment building due to deviation of a construction plan during an extended rainy period in the month of July. Although, areas such as Seffner reported rainfall amounts of greater than five inches, there continued to be no significant flooding events. The County continues to prepare to battle affects of heavy tropical thunderstorms and potential tropical cyclones, and County employees have taken the opportunity to work in response and recovery activities associated with potential impacts. Additionally, County employees through coordination with all local (municipalities included) and participating private entities performed exercises in the event of floods and tropical storm emergencies and disasters. Added, the County was identified as one of five Florida communities to begin developing a long-term redevelopment plan, which puts a community into the position of analyzing areas of vulnerability and designing avenues to increase Hillsborough County's resiliency to disasters. This included reviewing areas vulnerable to flooding and reviewing mitigation techniques. This process is concluded and the post disaster redevelopment plan was adopted in July 2010.
5. What impact did floods have on repetitive flood loss areas? There were no major flooding events that affected the repetitive loss areas during the reporting cycle. A request has been made of FEMA Region IV to share flood-damage information to verify flooding significance within Hillsborough County for the reporting period.
6. The section objectives and Action Plan lists objectives of the Plan: This information is illustrated on page 17. Also, refer to the LMS, Section 1.
7. Were any objectives not reached or is implementation behind schedule? If so, state why: Goals and actions are being met: The following illustrates those items addressed in the preceding period either fully or partially. The County is currently again in the process of reviewing updated watershed master plans for several watersheds in Hillsborough County. These will be used to direct Capital Improvement Projects, utilize Community Investment Taxes, eventually update models used to update Flood Insurance Rate Maps, and assist in creating new flood response systems. The County has permanently funded a Hazard Mitigation Program. Additionally, this Section is cementing its place through coordinating activities with the following departments: Public Works, Real Estate, Communications, and Emergency Management.
9. Should new projects be started or should any of the recommendations or objectives be revised? The County is currently updating a few watershed master plans to better identify flood-hazard boundaries. These updates have begun and will continue to further update FIRMs through a Letter of Map Revision and Map Change processes. This analysis, and an assessment of other funding sources for mitigation, will continue during the next cycle period that will include an update of the local mitigation strategy, if applicable. Recommendations associated with this effort may be forwarded to the County Administrator's Office for further direction if appropriate. Additionally, the County will continue to address actions identified with the long-term post-disaster redevelopment plan that is complete and has verified risks areas. This process identified nine public policy issues and greater than 150 activities to assist in having the community address post-disaster activities following a major flood and a wind disaster. This process will also add to flood protection to better rebuild following a disaster, but will also build greater resiliency into these areas due to action pre- and post-disaster.

10. Progress Report discussed and/or made available at a public meeting: This report will be available through the Planning and Growth Management Department and will be discussed during a public workshop and at the next LMS/CRS meeting in October 2010. The 2010 version was made available to the public. Meetings have been identified on the County Calendar with date and times published so that the public may attend and comment.

### **Activity 330 – Public Outreach Strategy (OPS)**

As mentioned in the Activity 330 Overview, the evaluation of the Public Outreach Strategy is included as part of the documentation for Activity 510, Floodplain Management Planning. As a “Class C” community with more than ten repetitive flood loss structures in the community, the County is required to annually evaluate its plans and outreach activities. The items below are documentation of the items that the County has performed over the last year to support goals of the strategy.

#### Outreach Projects Implemented to Attain Goals:

1. Provided written notification to property owners within or adjacent to repetitive loss areas and to property owners that have received one or more flood losses. The notification advised property owners and businesses of flood hazards, methods of protection and any financial assistance that may be available to them for flood mitigation projects – pursuant to the adopted floodplain management plan. Additionally, repetitive flood loss property owners are to be notified about Federal and State assistance through various grant programs.
2. Provided brochures and publications to property owners through media, mail and resource libraries at selected buildings throughout the county. Brochures and publications address local flood hazards, flood insurance, flood protection and mitigation, regulations, availability and location of flood mapping information, and the availability of the local flood resource library. The information is reviewed annually, which is revised and “reprinted” as demand requires.
3. The Strategy includes continuing to participate in the annual publication and distribution of the *Hurricane Guide for the Tampa Bay Region – new flood protection and risk information was included.*
4. Various members of the committee (principally County) presented at various business and neighborhood meetings regarding hazards facing residents and participated in Hurricane Awareness Seminars/Expos held throughout the County. Expos are at times conducted on the Hillsborough Community College campus.
5. Updated procedures in order to meet information needs of citizen. Informational events may include disseminating information at community centers and other areas with easy access for the public.
6. Provided educational information through media avenues, such as through newsletter/utility bill mail-outs.
7. Reviewed the local Telephone Company continued illustration of flood hazard information and areas.
8. Provided informational and educational training sessions associated with the hazard mitigation program (includes NFIP and flood topics). The County’s Contingency Planner also presented directly to businesses.
10. Verified information available through the Main Branch of the County Library System and provided a revised copy of FIRM maps.
11. The County updated the LMS, which serves as the adopted Floodplain Management Plan. The Plan was evaluated to determine success of implementation and was also supplemented with Appendix O to better address NFIPCRS activities.
16. Worked with floodplain management professionals of the county and municipalities and have worked with the Florida Floodplain Managers Association and FEMA to bring training to the local area.
17. Provided WEB based information system to provide flood protection information to residents. The County’s WEB page is a revised format that allows residents to obtain documents and view flood hazards with respect to an individual structure.
18. Reinstated, on a limited basis, County NFIP resource materials within local permitting offices. The materials were taken to meetings and other community events. Citizens also requested materials through the County’s Building Services offices.
19. Continued to identify an avenue for residents to locate floodplain information via GIS or telephone. Residents can now type in an address or property FOLIO number to see a picture of their property in relation to the existing and past flood zones.

## **Habitat Conservation Plan**

Information on the Habitat Conservation Plan is cited on page 4 of this report. In addition to the implementation of the program through regulations, the Plan is also implemented through the County's Environmental Lands Acquisition and Protection Program (ELAPP). The program was established to further the regulatory framework and for the purpose of acquiring, preserving and protecting endangered and environmentally significant lands in Hillsborough County.

With respect to the ELAPP, the Board of County Commissioners approved Environmentally Sensitive Lands Ordinance and the program took effect upon passage of a referendum on March 3, 1987. County voters approved this referendum by a 3 to 2 margin. It provided for a ¼ mill property tax over a four-year period to supply funding for the program, and it raised about \$22 million to purchase and preserve these lands. Because of the vast number of nominations to the program, it quickly became evident that there was not enough funding to purchase all of the lands that would qualify for preservation. On October 2, 1990, County voters, by a 3 to 1 margin, approved an extension of the property tax to fund up to \$100 million in bonds to continue this program. With the passage of the second referendum, Hillsborough County's program became the largest local preservation effort in Florida. There was an added extension to the program that was approved within the past four years.

The intent of the regulatory and land-preservation program is to protect environmentally unique, irreplaceable and valued ecological resources. The public acquisition of significant property must meet criteria; whereby, one or more of the following criteria must be satisfied and contain native and scarce flora and fauna:

- Lands that supply a significant habitat for endangered or threatened plants or animals
- Land which plays a vital role in the protection and enhancement of water quality (but cannot be protected through other government agencies or regulations)
- Land that provides buffer zones, links, or additions to existing environmentally sensitive lands, or which forms part of a natural greenway

Public meetings are held by the Site Selection Committee, the Parks Board and Board of County Commissioners to allow property owners of nominated sites to state positions. Citizens are solicited to express their opinions, as well as, to allow the County staff to present information and answer questions.

## **Set Goals**

As illustrated within the aforementioned, the planning process and committees crafted goals that have been adopted by the Board of County Commissioners that serve as guiding principals in the implementation of the Local Mitigation Strategy. Additionally, the team has maintained initial goals that serve specifically to implement floodplain management activities with respect to the County's participation with the National Flood Insurance Program Community Rating System. Goals and actions adopted within the LMS and identified within Appendix O were reviewed within public meetings and adopted by the Board of County Commissioners. The process of supplementing the Local Mitigation Strategy with Appendix O further sanctioned the continued use of past goals, and objectives, and now lists ranked projects.

Contacted communities and NFIP and EM Agencies (Attachments 8 through 11): With respect to coordination and review, input was solicited and received regarding goals and objectives, which were sustained with two requested modifications from the public:

- Increase the Design Floor Elevation to a full one-foot freeboard requirement
- Strengthen the use of outreach to better assist residents with obtaining information for Letters of Map Amendments

Subsequently, goals and objectives for floodplain management purposes are included with this document and within the LMS and illustrate the continuation of the direction approved by the Board of County Commissioners (with the initial adoption in 1998 and subsequent updates). The LMS was forwarded to the LMSWG, the State NFIP Coordinator, FEMA Region IV, the regional Water Management District, and the Regional Planning Council. Agencies in which requests were made within forums are identified in FPMP Table 6 and as identified beginning on page 7 of this report. No remarks were received at the time of completing this report.

There is a guiding goal within the Local Mitigation Strategy (the all-hazards guiding document) and number goals have been approved through the planning process in which floodplain management objectives and action items have been implemented (FPMP Table 9 through 13). Reports to goals and objectives will be given on an annual basis to identify the status in meeting actions to implement the County's participation with the National Flood Insurance Program Community Rating System. A guiding goal and four objectives are a part of the Local Mitigation Strategy and are listed in Section V, Page V-1 and in FPMP Table 9 of this document, which are accompanied by goals and objectives that have been adopted to specifically address floodplain management.

**FPMP TABLE 9  
FLOODPLAIN MANAGEMENT  
GUIDING GOAL AND IMPLEMENTING OBJECTIVES**

<b>DOCUMENT</b>	<b>GOAL</b>	<b>OBJECTIVES</b>
Local Mitigation Strategy, Guiding Goal and Objectives	Minimize the effects of any potential natural or man-made disasters on our community and its infrastructure	Public Education: Increase public awareness in the use of mitigation programs and techniques to reduce the impacts of natural and man-made hazards.
		Coordination: Coordinate public and private sector participation in identifying and managing and/or implementing mitigation projects and measures throughout Hillsborough County.
		Development Management: Identify and implement a combination of regulatory, incentive and initiative programs that will reduce potential loss and would encourage participation in ongoing hazard mitigation.
		Critical Facilities: Develop and maintain an inventory management system on all data affecting hazard mitigation.
Local Mitigation Strategy, Floodplain Management Plan Implementing Objectives		Provide leadership in protecting low-income properties and public housing from the impacts of floods.
		Prevent new development in the floodplain from increasing runoff and resulting in increases in flood volumes in the floodplain.
		Develop a public awareness program that informs <u>all</u> property owners in the flood zones that they are located in a flood zone.
		Provide advice and assistance to property owners concerning the protection of their properties from flooding, local drainage and sewer back-up problems.
		Develop and aggressive program to identify and obtain funding for both pre and post disaster mitigation projects.
		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.
		Prioritize capital projects that will mitigate flood impacts in those areas of the County that have experienced significant flooding problems.
		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.
		Continue to implement 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, which includes flooding.
		Review the effects and locations of areas that experience flooding and determine what steps, if any, the County can take to alleviate future impacts.

Source: Hillsborough County Planning and Growth Management, Hazard Mitigation, 2010.

**Review Plan Activities**

FPMP Tables 9 through 13 illustrates flooding mitigation activities within the Local Mitigation Strategy (LMS, Section V, beginning on page V-10). Mitigation activities are both specific to the type of flooding and general to flood mitigation that is applicable throughout the community.

**FPMP TABLE 10  
FLOODPLAIN MANAGEMENT, MITIGATION SPECIFIC TO FLOODING EVENTS**

Coastal or Riverine Erosion	<p>While the County has miles of coastline, a large majority of the developed coastal shoreline has been hardened by seawalls. The seawalls, while not an environmentally preferred mitigation option, do minimize erosion from minor to moderate flooding events. Strategies to protect the more pristine coastal areas of the community against erosion include: acquisition of sensitive coastal areas through either the county-wide Environmental Lands Acquisition Preservation Program or various state programs such as Florida Forever; adherence to current engineering standards, vegetation and setbacks.</p>
Hurricanes and Tropical Storms	<p>There is a multitude of approaches to mitigate effects from hurricanes. The following illustrates mitigation initiatives that have been the most effective within the region and throughout the U.S.</p> <ul style="list-style-type: none"> <li>• <i>Public awareness and evacuation plans</i> -- The loss of life due to hurricanes has been reduced due to warning and forecast advances, public awareness programs and the development of evacuation plans. Evacuation efforts and the knowledge of the evacuation process assist in moving residents from areas vulnerable to storm surge, historically the major hurricane “killer”. However, local officials recognize that public education is key to the success of any response plan especially in the densely populated metropolitan communities such as Tampa Bay.</li> <li>• <i>Building construction</i> -- Mitigation of property damage has been most successful in areas specifically designated special flood hazard areas through the implementation of construction codes, land-development regulations and growth management policies.</li> <li>• <i>Special flood hazard area setbacks</i> -- Land-development regulations developed in response to the county and cities participation in the National Flood Insurance Program have ensured structures constructed within the previous 20 years are elevated above base flood elevations and can withstand potential wave action. In addition, the implementation of Comprehensive Plan policies and the creation of a local Environmental Protection Commission have further minimized flooding impacts.</li> <li>• Development prior to the adoption of various mitigation policies and regulations remains more susceptible to damage. Public education programs have been initiated to assist businesses and residents learn about retrofitting techniques. Mitigation strategies have also included repetitive loss acquisitions, structural elevations, wind retrofit projects, critical facility retrofits and acquisition of designated conservation areas.</li> </ul>
Flooding	<p>Warnings of potential flooding, or of an actual flood, are the responsibility of the National Weather Service (NWS) and the Florida Division of Emergency Management (DEM). Warning time for flood events may vary significantly. The least warning time would be with severe thunderstorms, which occur frequently in our area, but give little notice as to the extent of rainfall that can be produce in various parts of the County. With regard to riverine flooding as little as 4-6 hours of warning are possible. An average warning time for coastal flooding would be about 12 - 18 hours, however certain systems could produce more or less warning time. In addition to warnings and public notification, there are other measures of protecting against floods. All the jurisdictions in Hillsborough County participate in the National Flood Insurance Program (NFIP). Through this participation, standards exist for mitigation development in areas designated as flooding. About 54% of the 181,486 vacant acres in the 100-year floodplain are to be developed for residential, commercial, industrial uses or public facilities, indicating risk reduction strategies should be considered prior to development of this vacant land. Source: Hillsborough County Profile /Integration of the Local Mitigation Strategy into the Local Comprehensive Plan/Florida Department of Community Affairs/2009 update. Through the NFIP, development regulations have been approved that assist in ensuring new development is designed and constructed in a fashion that is more flood-resistant and out of the 100-year floodplain.</p>

Tsunamis	As noted above, the likelihood of a tsunamis affecting Florida is slight. Even so, the possibility of a tsunami affecting the eastern coast of Florida is real. Consequently, emergency management professionals should remain on alert to those events which may result in a tsunami.
Dam/Levee Failures	The State and industry have in-place federally approved dam inspection processes (Federal Insurance Agency, 1998). Areas associated with mining have been identified on growth management maps and within the Hillsborough County Comprehensive Plan. Use of these programs and continued cooperation between the County, State, and industry will serve to minimize the risks of dam failures within Hillsborough County.

In review of the above generalized mitigation techniques, a comprehensive review of mitigation guiding principals are reviewed and included within the Local Mitigation Strategy, Section 5, pages V-1 through V-15. Within the review, the following mitigation subject areas are analyzed and have been affirmed by the Board of County Commissioners as mitigation guidance for respective subject areas:

**FPMP TABLE 11  
GUIDING PRINCIPALS**

MITIGATION	GUIDING PRINCIPAL	DESCRIPTION
OBJECTIVES	Public Education	Increase public awareness in the use of mitigation programs and techniques to reduce the impacts of natural and man-made hazards.
	Coordination	Coordinate public and private sector participation in identifying and managing and/or implementing mitigation projects and measures throughout Hillsborough County.
	Development Management	Identify and implement a combination of regulatory, incentive and initiative programs that will reduce potential loss and would encourage participation in ongoing hazard mitigation.
	Critical Facilities	Develop and maintain an inventory management system on all data affecting hazard mitigation.
EVALUATION OF EXISTING AUTHORITIES . . . RESOURCES	Regulatory Review	Local governments employ regulatory procedures that manage growth through the development review process. These regulations are principally associated with mitigating the impacts of development associated with floodplains/floodways (includes the establishment of base-flood elevations or identification of floodproofing), wetlands, and coastal high-hazard areas.
	Plans and policy implementation	The adopted Local Government Comprehensive Plans are used to guide growth based upon factors such as: development limitations, public-service provision and environmental resource protection. Additionally, the County and municipalities have adopted other plans for use in mitigating hazards and in the Development review process.

	Program implementation	The County has implemented programs that are effective in mitigating hazards, which are mostly confined to hazards associated with flooding, at this time. Some plans are not unified or integrated. One of the principal purposes of the Local Mitigation Strategy is to unify these programs and “identify areas for strengthening” to ensure implementation of the Local Mitigation Strategy. Plans principally associated with mitigating development that are becoming better integrated are: Post - Disaster Redevelopment Plan; Greenways and environmental lands acquisition – some areas identified for acquisition may serve a dual purpose (recreation/preservation and hazard mitigation); National Flood Insurance Program and the Community Rating System criteria provides for the provision of flood insurance; Floodplain Management and Stormwater drainage programs – these programs have been established to minimize and mitigate flooding hazards.
COOPERATING TECHNICAL PARTNER (CTP) PROGRAM AND THE DIGITAL FLOOD INSURANCE RATE MAP (DFIRM)	CTP Program	2009 – Anticipate adding a mechanism in which the county will assist in updating the DFIRMs.
NATIONAL FLOOD INSURANCE PROGRAM (NFIP)	Compliance	All jurisdictions are active participants in the NFIP. In an effort to ensure continued compliance with the NFIP, each participating community will: 1. Continue to enforce their adopted Floodplain Management Ordinance requirements, which include regulating all new development and substantial improvements in Special Flood and Coastal High Hazard Areas (SFHAs and CHHAs); 2. Continue to maintain all records pertaining to floodplain development, which shall be available for public inspection; 3. Continue to notify the public when there are proposed changes to the floodplain ordinance or Flood Insurance Rate Maps; 4. Maintain the map and changes identified through Letters of Map Amendment; Revisions or changes; 5. Continue to promote Flood Insurance for all properties; 6. Continue their Community Rating System outreach programs
	Repetitive Loss Initiative	Implementation of the Floodplain Management Plan
	Flood Mitigation Activities	The possible activities that can be undertaken to reduce potential flooding to repetitive loss properties must be balanced with rights of property owners, the ability of the County to finance various activities and the potential benefits of those activities. Considering these variables, the County has undertaken the following steps: update the list of repetitive loss properties on an annual basis; provide properties within repetitive-loss areas a bulletin or personal warning of risk in the respective area; perform reviews and site visits, where appropriate, for all repetitive loss structures; and perform an analysis of flood annual losses.

	Flood Damage Prevention Action Plan	Taking into consideration the existing fiscal constraints in Hillsborough County and the realization that all floodplain management activities are conducted through various agency-operating budgets, the following action plan is designed to serve as a general design to mitigate and manage the impact of development activity in the floodplain: Prevention; Stormwater Management; Drainage System Maintenance; Property Protection through Acquisition; Land acquisition purchases by the Environmental Land Acquisition and Protection Program (ELAPP); Building Elevation; Insurance; Emergency Services; Structural Projects; Storm Sewers; On-Site Attenuation; Public Information; and Map information.
	Community Rating System (CRS) Overview	Implementation of tasks per activities: 300, 400, 500, and 600.

Repetitive Flood-Loss: In addition to information regarding this subject on page 19, the following are specific activities that have been incorporated in the Hillsborough County planning process since the initial adoption of the Floodplain Management Plan in 1998. The activities continue and are associated with repetitive flood-loss protection and are:

- Identify repetitive loss properties and monitor (Appendix O, Attachment 17; LMS Appendix L, and LMS Section V, page V-9)
- Ensure properties and properties within repetitive-loss areas are sent informational notices annually (Appendix O, Attachment 18 and 19 -- copies of brochures mailed are included. The list of 15,900 addresses are within repetitive flood-loss areas is available from the hazard Mitigation office)
- Inspect all new repetitive loss properties (Permit records researched and AW 501 forms are included with the annual assessment. Aw 501 forms are being sent concurrently with the 2010 annual recertification. There weren't any added repetitive flood-loss properties identified.)
- Request that FEMA annually notify the County of all flood claims processed (Claims information is listed within Appendix O, Attachment 14 where said information is not in violation with the Federal Privacy regulations.)
- Provide a report to the County Administrator on any emerging patterns of flooding (There were not any added patterns to flooding within Hillsborough County.)

The action plan identifies who is responsible: Additional to programs are mitigation projects. The project ranking information and the project list is in both the Attachment 20 of this document and is referenced within the LMS Appendix K. The list of projects within Attachment 20 has respective projects ranked with respect to floodplain management planning. Additionally, the listing of mitigation projects are identified with the entity responsible for the project and the mechanism identified in which the project is expected to be funded.

Number of categories with mitigation actions: The ranked projects identified within the previous paragraph identifies who is responsible, when the projects will be implemented and identifies potential funding sources. Additionally, within the Action Plan section of this report, there are action items from six categories and there are action items associated with other hazards identified within the LMS (Section III and V). This information has been identified within the aforementioned – see checklist within Attachment 21.

Post-disaster mitigation policies and procedures: The communitywide Post-Disaster Redevelopment Plan was adopted by the Board of County Commissioners in July 2010 and is referenced within the LMS and within the adopting ordinance located in Appendix O, Attachment 3. Within the document, policies and procedures have been adopted, which augment post-disaster mitigation initiatives identified within the Local Mitigation Strategy. The initial LMS recommended a study be conducted to identify other post-disaster mitigation policies. The item was completed with the adoption of the Plan in 2010 as stated above.

Natural resource protection activities from a habitat conservation plan: This section is identified on pages 4 and 24 of this report. Within the County's Habitat Conservation Ordinance and the countywide Environmental Lands Protection Program, specificity to habitats and respective ranking of said areas are identified. These identifications illustrate rare, threatened, or endangered aquatic or riparian species within designated areas. The website for these programs is listed on page 4 of this report. Additionally, pursuant to codes associated with this subject, clustering and setback requirements do exist in which project approvals are sanctioned.

Action items (other than public information) for other natural hazards: The LMS is a comprehensive document and assesses the community with respect to natural and manmade disasters. However, this Appendix furthers the assessment with respect to Floodplain Management. Added items include two recommendations forwarded from the community, which are:

- Analyzing the feasibility of achieving a one-foot freeboard requirement
- Identifying avenues to better assist the community in obtaining information with respect to FEMA Letters of Map Amendments and Revisions.

Additionally, the process in itself showed a need to maintain the achieved 4/4 BCEGS classification. To accomplish this task, the County must continue to enforce the manner in which it implements the Florida Building Code and its recognized higher regulatory standards identified with its participation with the NFIPCRS.

In the LMS, added activities are identified that are in addition to those routinely used within the Floodplain Management Plan, and are listed in the following table – Vulnerability and Mitigation activities. These are activities that strengthen the county's resiliency to disasters.

**FPMP TABLE 12  
VULNERABILITY AND MITIGATION ACTIVITIES**

<b>AREA OF VULNERABILITY</b>	<b>MITIGATION DESCRIPTION</b>
Hurricanes and Tropical Storms	Public awareness programs, severe weather warnings and evacuations, building construction regulations, structure retrofits, Special Flood Hazard Area setbacks and additional development standards, Comprehensive Plan growth management policies.
Flooding	Public awareness programs, building construction regulations, structure retrofits, severe weather warnings system (including water-level/gauging systems for riverine areas), and flood insurance provided through the NFIP, and Flood Mitigation Assistance programs.
Coastal/Riverine Erosion	Public awareness programs and evacuations plans, building construction regulations, structure retrofits, severe weather warning systems, preparation for schools, beach renourishment, erosion control devices, participation with the NFIP – V-Zone identification, acquisition of sensitive coastal areas, Ship and Port channel dredging, infrastructure monitoring, and Comprehensive Plan policy implementation.
Tsunami	Public awareness programs, severe weather warnings and evacuations, building construction regulations, structure retrofits, Special Flood Hazard Area setbacks and additional development standards, Comprehensive Plan growth management policies.
Dam/Levee Failures	Public awareness programs, building construction regulations, Hazardous Materials Rescue teams, dikes/berms, automated notification systems (phone system at EOC), identification of structures and populace in potential fall-out areas, Comprehensive land-use maps and respective policies and emergency preparedness plans.

Source: Hillsborough County Local Mitigation Strategy, Section IV, page IV-84; 2010.

In addition to the mitigation activities listed, a review was conducted of the planning process, which was conducted through the Emergency Manager’s office of Tampa Electric Company and with support of the Hillsborough County Communications Department. Basically, no process is complete without an after-action summary. In the process of updating the all-hazards document and the floodplain management plan, the following were identified to better address within the upcoming three-year NFIPCRS implementation period.

1. Community resilience is predicated on how well a community prepares businesses and government to recover from catastrophic events, the goal is to retain our residents and businesses
2. Personal, business, and community level preparedness are all equally vital to the success of a community
3. It is important to use pre-established terminology
4. Since most of the infrastructure is owned by the private sector it was important that input be led by a private sector planner in conjunction with a county planner
5. A process can be used as a vehicle to document catastrophic planning efforts, but the coordination of recovery and redevelopment elements cannot be left on the pages of the plan -- the process must remain a “living” plan that is exercised and visited several times a year to augment and improve
6. The only way to elicit self-preparedness is to provide residents with the information they need to build personal plans
7. It is important to provide an outreach to businesses through workforce agencies and chambers
8. Provide an area to focus limited resources to service post-disaster needs and demands

9. Promote building smarter to reduce displacement at time of a future disaster
10. Consider the land-use intensity in specific areas to ensure private and public-service provisions for businesses

It is important to continue to identify mitigation initiatives and actions to reduce the community’s vulnerability to hazards. Sections of the LMS and of this report have been included to interconnect the processes. As such, the next step is to identify said mitigation initiatives and actions. The next section will outline mitigation strategies that will be pursued to address the identified risks to real property and structures. The strategies identified in the next section were reviewed by cities and county departments, the Local Mitigation Strategy Working Group and other public and private entities that may be affected by their continued implementation – mitigation techniques are of past adopted documents.

Hillsborough County and municipalities are involved in creating, implementing, and participating in various programs that work towards achieving the goal and objectives identified as the LMS Guiding Principles. To further the understanding of specific hazards and their associated mitigation initiatives/actions, a brief description follows in alphabetical order.

**FPMA 13  
COMMUNITY MITIGATION MEASURES TO  
IMPLEMENT ACTIVITIES FOR BUILDING RESILIENCY TO FLOODING EVENTS**

<b>COMMUNITYWIDE MITIGATION MEASURES</b>	<b>ACTIVITY/INITIATIVE (applicable measures for protection from flooding events)</b>
Assessments	Planning tools and techniques are used to reduce the threat of damage and disasters. Mitigation actions need to be reviewed from both a planning and an operational perspective. Initiatives and processes will need to be evaluated and possibly redesigned according to these assessments. Long-term redevelopment can better direct resources to meet mitigation objectives such as acquiring lands with repetitive flood losses for public or appropriate uses.
Canals and Waterways	Rivers, canals and other waterways are important components to the Bay area’s economic and ecological environments. The Tampa Bay area is fortunate to have both a Port Authority and U.S. Coast Guard to manage clearance of federal channels. Other areas are maintained through various other agencies under the state, county, and cities. There are initiatives to ensure areas are maintained to some extent (unless in an area designated not to receive such attention) and shorelines are monitored for erosion
Development Management	Development management refers to the use of planning tools and techniques to reduce the threat of damage from disasters. Such tools can also be used to help direct long-term development patterns in a manner that can help minimize future threats. For example, greenways and parks could be developed in flood prone areas to collect water and minimize flooding to surrounding structures. Facilities or structures, which have undergone repetitive damage, could be relocated to more secure areas. Flood management plans can help to direct efforts to reduce the community’s vulnerability to flooding. Through long-term redevelopment plans, such as reducing density in higher risk areas, the cities and County can help to create neighborhoods that are more disaster-resistant.

Education/Coordination	<p>Public and private-sector coordination is vital for the long-term success of hazard mitigation. Recent efforts have focused on the inventory of critical facilities and the needs and desires of the public departments/agencies within Hillsborough County. Efforts are being made to pull in more private sector participation. Expos and web announcements have begun the process of alerting the public and private sectors as to the purpose of Hazard Mitigation. The Community Ratings System's Outreach Strategy Group has brought in private sector participation and is establishing precedents for cooperation between municipalities within Hillsborough County. Exposure through newspapers, government cable access channels, and county and city web pages will continue to keep interested parties informed and educated while new initiatives are being created and implemented. Increased educational awareness of the need for and importance of hazard mitigation can help to encourage home and business owners to retrofit their structures for improved protection. Residents receive education information at annual Neighborhood Conferences, Tampa/Hillsborough Hurricane Expo, and numerous public meetings such as those related to the Post-Disaster Redevelopment Plan.</p>
Emergency Services/Emergency Management Enhancements	<p>The coordination of emergency services during times of disaster in the county is through the Public Safety Department's Emergency Operations Center (EOC) and in the City of Tampa; it is through the Office of Emergency Management's Emergency Operations Center. For many natural disaster events, the National Weather Service issues various types of warnings, which the Emergency Operations Center uses as indicators, and thus initiates community activities appropriate to the potential threat of the event. Additionally, various road and street departments furnish various levels of assistance to residents throughout the county and cities. If evacuation is deemed necessary, the EOC opens shelters in 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. For example, providing information to residents on what to do in the event of a hazardous materials incident and collection of unused hazardous chemicals could help to reduce injuries and potential health consequences associated with airborne toxic chemicals.</p>
Flood Control	<p>Generally, flood control techniques involve making improvements to the stormwater and drainage facilities to improve the flow of floodwaters or that will reduce areas subject to periodic floods. These techniques involve the rehabilitation and expansion of conveyance systems and creation of retention areas.</p>
Flood Prevention	<p>Through the regulatory/review activities of the various planning agencies, the preservation of open space and the restriction of development in the floodplain is a priority. The various development codes (Land Development Code) provide regulations that restrict and manage development activity in the floodplain by limiting wetlands encroachment and preserving open space. The enforcement of the Land Development Code ensures that all new development retains and attenuates respective amounts of stormwater runoff created. Specifically, the Public Works Department evaluates each actual flood event to determine the effectiveness of recently constructed projects and identify potential additional projects or improvements. Additionally, 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. Additionally, the cities and the County will continue to take the appropriate actions to maintain the stormwater management systems. The County's Water Department and Tampa's Stormwater Department, through maintenance programs funded by their operating budgets, maintain the stormwater conveyance systems to ensure that flooding impacts are minimized.</p>

<p>Flood Reduction/Protection</p>	<p>Flood reduction involves techniques for flood control and protection such as elevating homes or land on the property owner’s side and stormwater and drainage improvements from the government’s side. Typical retrofits for flooding include elevating buildings above the flood hazard level, providing watertight closures for doors and windows, and using floodwalls around ground level openings. Alternatively, such openings could be eliminated. Also included is the use of water-resistant materials, structural reinforcements to withstand water pressures, and placement of mechanical and electrical elements in the upper parts of the building. Stormwater and drainage mitigation typically includes improvements to the facilities to better control the flow of floodwaters or reduce areas subject to periodic flooding. These techniques involve the rehabilitation and expansion of conveyance systems and creation of retention areas. A separate area of flood reduction includes consideration given to “nuisance” or non-critical flooding through partnerships with development interest to improve parking in areas of known parking lot and street flooding.</p>
<p>Property Protection</p>	<p>The County is working toward establishing a funding source for acquisition of properties that have experienced repetitive losses due to flooding. Through land acquisition purchases by the Environmental Land Acquisition Program, Hillsborough County communities will continue to acquire property located in the floodplain. 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 may maintain storage capacity and reduce the number of structures threatened by flood water. A complimentary benefit is the acquisition of adjacent uplands as open space that further reduces the introduction of impervious surface that can contribute to flooding problems and degradation of water quality. Additionally, through the enforcement of floodplain ordinances (for all but one community within the county) and in conjunction with participation in the National Flood Insurance Plan’s Community Rating System, structures located in floodplains and storm surge areas will continue to be identified for elevating to mitigate because their location is in flood-prone areas. This is viewed as a major contribution toward mitigating the impacts of flooding. All but one community within the county will continue to actively participate in the National Flood Insurance Program Community Rating System. A major contribution to this effort is the recognition that respective Community Rating System programs that are managed by full-time staff members. To this end, communities within the county have begun to develop 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 make certain that property losses in the floodplain will be covered by insurance.</p>
<p>Public Information</p>	<p>The County has undertaken various activities that advise property owners concerning the hazards and potential mitigating activities associated with building in the floodplains. Residents, both existing and potential, can access information relating to the floodplains via the Hillsborough County Building Services Division, the City of Tampa Construction Services department, or for FEMA FIRMs online at: <a href="http://www.hillsboroughcounty.org/pgm/hazardmit/floodMap/firm/home.cfm?gridmap=1">www.hillsboroughcounty.org/pgm/hazardmit/floodMap/firm/home.cfm?gridmap=1</a>. or, by contacting FEMA directly. Floodplain determinations can be requested that provide an official determination of whether a property is located, fully or partially, within a FEMA floodplain. Additionally, the County and the City of Tampa have mapped the floodplains on its Geographical Information System (GIS). The County and the City of Tampa have also mapped the storm surge from hurricanes based on the approved models.</p>

<p>Structural Projects/Structural Hardening</p>	<p>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. 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. The City of Tampa created a comprehensive stormwater utility, approved by City Council in 2003, which, coupled with general revenue, funds the Capital Improvement Program, maintains present conveyance facilities, and addresses water quality issues. Each development, whether private or public, is required to meet the provisions of the Stormwater Management Technical Manual. Instead of providing reservoirs to store stormwater runoff, each project must provide on-site attenuation of its run off to discharge into 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 management facilities to alleviate flooding impacts to roads and private property.</p>
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This section of the report serves also to outline the Action Plan for implementation of the Hillsborough County participation with the National Flood Insurance Program Community Rating System. The next section will reiterate this statement; however, an outreach plan with minimum task similar to that within Section I of the LMS has been included to identify minimum actions to be performed through the Public Outreach process. Items within this section of this report, when used together with the Set Goals and Review Plan Activities sections of this report serve as the Actions Plan for the Floodplain Management Plan.

## 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 aforementioned section outlines those annual tasks to be performed or implemented in the implementation of the adopted Hillsborough County Floodplain Management Plan.

The Action Plan: The Floodplain Management Plan action items are referenced within the Local Mitigation Strategy (the Floodplain Management Plan) Section 5 – The Mitigation Blueprint and reiterated within the prior and current section of this report. This section and referenced tables of this report and that of the Local Mitigation Strategy are, in fact, past and current tasks and programs used to implement the County’s participation with the National Flood Insurance Program Community Rating System (NFIPCRS). As outlined and adopted within the Local Mitigation Strategy, the Action Plan continues into the future until such time it is modified or repealed.

In addition to the items previously referenced, Hillsborough County will continue to solicit public participation in the LMS planning process. In addition to noticing the LMS meetings, the section and its partners on the LMS Working Group actively seek public input as well as provide the public with opportunities to learn more about mitigation for their family, business and community. Below is a list of minimum events to continue and that will be conducted on an annual basis unless circumstances such as a disaster prevents such to be implemented.

- Provide educational information through such media avenues as the County’s Newsletter, utility-bill notifications, or electric service bills through the Tampa Electric Company (TECO), Hillsborough County, the City of Tampa and the City of Temple Terrace
- Provide educational information through jurisdictional Internet “Web” sites that also provide links to FEMA ([www.fema.gov](http://www.fema.gov)) and the State of Florida ([www.floridadisaster.org](http://www.floridadisaster.org))
- Provide link to current FEMA FIRM maps
- Continue to publish the annual Hurricane Guide
- Continue to provide evacuation maps and emergency preparedness information within the local telephone books
- Continue with conducting seminars and training sessions for businesses
- Continue to mail notices to properties listed within the Special Flood and Coastal High Hazard Areas, to properties listed within repetitive flood-loss areas, and to repetitive flood-loss property owners
- Perform an annual review of structures identified as being a repetitive-flood loss structure by the Federal Emergency Management Agency or by the County
- Place NFIP materials within local permitting offices and libraries, and provide web links for materials where feasible
- Provide the main branch of the County Library with a complete copy of FIRM maps after each FIRM update or as required to maintain a full set of maps
- Participate in the annual Hillsborough County Neighborhood Conference
- Participate in annual Hurricane Expo
- Conduct public meetings to solicit input to the Local Mitigation Strategy (and referenced floodplain management activities)
- Issue one or more press releases and/or place an advertisement soliciting input to local mitigation and floodplain management activities
- Meet with the Steering Committee, jurisdictions and other entities to give updates
- Distribute the LMS/FPMP survey to the neighborhood and condominium associations registered with the Hillsborough Office of Neighborhood Relations
- Conduct an annual exercise to test floodplain management activities and warning systems

In addition, conduct annual updates as required following an evaluation of actions. Such activities will include:

- Notice meetings to ensure continued public participation
- Identify any changes to the hazard assessment
- Identify changes to the project priority list
- Identify changes to the critical facilities list
- Identify changes to the repetitive loss list
- Identify revision to any maps

- Continue to review critical facilities
- Continue evaluating and ranking projects on the project list for floodplain management purposes

Hillsborough County's participation with the NFIPCRS requires specific tasks to be met and reviewed following an annual and three-year cycle. To ensure maintenance to the program and to ensure implementation of activities in which the County receives credit under the NFIPCRS program, the following activities will be performed to no less than the level in which Hillsborough County can sustain the current nationally recognized classification (rating) of "5" or to the level in which staff is approved to seek a NFIPCRS classification of "4". The rating of 5 currently benefits unincorporated residents and businesses with an aggregate amount greater than \$5 million. Additionally, this standing requires Hillsborough County to also sustain its ISO Building Code Effectiveness Grading Schedule (BCEGS) Classification of 4/4. The following is a summary of those items in which the County will continue seeking credit as approved by the Board of County Commissioners:

- Activity 310 – Elevation Certificates: The Building Department maintains elevation certificates for new and substantially improved buildings. Copies of elevation certificates are made available upon request. Elevation Certificates are also kept for post-FIRM buildings
- Activity 320 – Map Information Service: Credit is provided for furnishing inquirers with flood zone information from the community's latest Flood Insurance Rate Map (FIRM), publicizing the service annually and maintaining records
- Activity 330 – Outreach Projects: A community phone book is delivered to all properties in the community on an annual basis. An outreach brochure is mailed annually to all properties in the community's Special Flood Hazard Area (SFHA). The community also provides flood information through an outreach program strategy
- Activity 350 – Flood Protection Information: Documents relating to floodplain management are available in the reference section of the Hillsborough County Public Library. Credit is also provided for floodplain information displayed on the community's website
- Activity 360 – Flood Protection Assistance: The community provides technical advice and assistance to interested property owners and annually publicizes the service
- Activity 410 – Additional Flood Data: Credit is provided for conducting and adopting flood studies for areas not included on the FIRMs and that exceed minimum mapping standards. Credit is also provided for a cooperating technical partnership agreement with FEMA
- Activity 420 – Open Space Preservation: Credit is provided for preserving approximately 49,307 acres in the SFHA as open space. Credit is also provided for open space land that is deed restricted and preserved in a natural state
- Activity 430 – Higher Regulatory Standards: Credit is provided for enforcing regulations that require freeboard for new and substantial improvement construction, cumulative substantial improvement, protection of critical facilities, protection of floodplain storage capacity, natural and beneficial functions, enclosure limits, other higher regulatory standards, and land development criteria. Credit is also provided for enforcement of state mandated regulatory standards, for a BCEGS Classification of 4/4, for enforcement of the Florida Building Code, and for staff education and certification as floodplain managers
- Activity 440 – Flood Data Maintenance: Credit is provided for maintaining and using digitized maps in the day to day management of the floodplain. Credit is also provided for establishing and maintaining a system of benchmarks
- Activity 450 – Stormwater Management: The community enforces regulations for stormwater management, freeboard in non-SFHA zones, soil and erosion control, and water quality
- Activity 510 – Floodplain Management Planning: Based on the updates made to the NFIP Report of Repetitive Losses as of June 30, 2008, 337 repetitive loss properties and is a Category C community for CRS purposes. All requirements for the 2009 cycle have been met. Credit is provided for the adoption and implementation of the Floodplain Management Plan -- as a Category C community with an approved Floodplain Management Plan, a progress report must be submitted on an annual basis
- Activity 520 – Acquisition and Relocation: Credit is provided for acquiring and relocating buildings from the community's flood hazard area
- Activity 530 – Flood Protection: Credit is provided for buildings that have been flood proofed, elevated or otherwise modified to protect them from flood damage
- Activity 540 – Drainage System Maintenance: A portion of the community's drainage system is inspected regularly throughout the year and maintenance is performed as needed by Hillsborough County Public Works

Department. Records are being maintained for both inspections and required maintenance. Credit is also provided for an ongoing Capital Improvements Program. The community also enforces a regulation prohibiting dumping in the drainage system

- Activity 610 – Flood Warning Program: Credit is provided for a program that provides timely identification of impending flood threats, disseminates warnings to appropriate floodplain residents, and coordinates flood response activities. Credit is also provided for the designation as a Storm Ready Community by the National Weather Service
- Activity 630 – Dam Safety: All Florida communities currently receive CRS credit for the state’s dam safety program

Also to be included with the Action Plan are those projects approved with the LMS, Appendix G and Attachment 20 of this report. Respective projects are listed and have been ranked for floodplain management purposes.

## CONTINUED IMPLEMENTATION, EVALUATION AND REVISION PROCESS

Procedures for monitoring and recommending revisions to the plan: The Floodplain Management Plan (FPMP) is maintained pursuant to the annual reporting process required with the annual submittal of the AW 214 form, which is the annual certification of Hillsborough County's continued participation with the National Flood Insurance Program Community Rating System (NFIPCRS). Additionally, the Local Mitigation Strategy (LMS) pursuant to 44 CFR Part 201 (Attachment N -- LMS Adopting Ordinance) continues to be maintained on an annual basis pursuant to Florida Administrative Code (9G-22, FAC). Within the LMS, Section VII establishes a process in which the LMS and FPMP will be maintained and updated. Although, the LMS is required to be updated once every five years, the FPMP will be updated using the LMS and NFIPCRS processes. The update of the FPMP will be updated once every three years or as otherwise identified in the CRS Manual. The process in which the FPMP will be maintained includes adherence to:

- Completing NFIPCRS activities to maintain the County's participation with the National Flood Insurance Program and Community Rating System, which includes performing activities included with AW 214, reviewing and completing AW 501 forms, and activities identified within the aforementioned Action section of this Plan as updated with the supplement to the Local Mitigation Strategy, Floodplain Management Plan -- Appendix O
- Completing activities pursuant to 9G-22, FAC
- Having the Board of County Commissioners approve the annual membership to the Local Mitigation Strategy Working Group that also serves as the CRS Committee
- Implementing the annual update to the Local Mitigation Strategy pursuant to Section VII (page VII-1): LMS Plan Maintenance pursuant to required timeframes, procedures for monitoring and evaluating activities identified with the LMS action plan (LMS, Section VII, pages VII-2 through 5

Same planning committee does evaluation: Staff support for monitoring and recommending plan changes will still be conducted through the existing Local Mitigation Strategy Working Group (LMSWG). This group is the existing planning committee that updated the Local Mitigation Strategy that serves as the Floodplain Management Plan and was requested to comment on the FPMP's supplement. The Committee for Floodplain Management Plan is expected to remain the same; however, there may be some limited personnel changes due to attrition or reductions within local governments that serve the committee. The Committee is referenced within the Acknowledgement Section of the LMS and in the LMS, Section 1, page I-9 through 13.

Planning committee qualifies under 511(2)f. and g: The LMS Working Group, as the planning committee, is continued under the LMS Adopting resolution and pursuant to Florida Administrative Code, 9G-22. The committee will remain with representatives from the business community and it will continue to have representation from citizens. Additionally, membership will continue to have representation that live or work in, or near, flood-hazard areas that include some of the County's repetitive flood-loss areas.

With respect to plan maintenance, it is part of a continuing assessment performed by Hillsborough County's Hazard Mitigation Program; whereby, the following is a part of a continuing program to review and update: policies, programs and plans as part of adopted growth management initiatives, floodplain management strategies, and countywide emergency management plans. Any updates to the critical facilities, repetitive flood loss or hazards analysis will be reflected on all maps as required. Plan Maintenance and Updating are also adopted actions and are identified within the LMS -- Plan Implementation / Action Plan, Vii-3.

## **ADOPT THE PLAN**

This document is an update performed due to routine and required maintenance to the communitywide Local Mitigation Strategy and to the Hillsborough County Floodplain Management Plan (FPMP). Specific citations in which the FPMP has been updated include:

- 510 Floodplain Management Planning, AW-510-1 through 3
- 510 Repetitive Loss Area Analysis (RLAA), AW-510-4
- Local Mitigation Plan Review Crosswalk (44 CFR, Part 201 – standards to update an all-hazards document)
- Local Mitigation Strategy, Section VII

This document serves as the required update to the Floodplain Management Plan. The Local Mitigation Strategy, as supplemented by the 2010 Floodplain Management Supplement, is designated as the Hillsborough County 2010 Updated Floodplain Management Plan. Upon Board approval, the Hillsborough County 2010 Updated Floodplain Management Plan shall be transmitted to the FEMA for rating in accordance with the standards of the Community Rating System. The Board of County Commissioners is anticipated in adopting the Floodplain Management Plan on September 22, 2010, which the adopting resolution Statement of Intent is as follows (Attachment 2 -- Adopting Resolution):

**A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF HILLSBOROUGH COUNTY, FLORIDA APPROVING THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT TO THE LOCAL MITIGATION STRATEGY; INCORPORATING THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT INTO THE LOCAL MITIGATION STRATEGY; APPROVING THE LOCAL MITIGATION STRATEGY, AS MODIFIED AND SUPPLEMENTED BY THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT; APPROVING THE LOCAL MITIGATION STRATEGY, AS MODIFIED BY THE 2010 FLOODPLAIN MANAGEMENT SUPPLEMENT, AS THE 2010 UPDATED FLOODPLAIN MANAGEMENT PLAN; AND, AUTHORIZING THE TRANSMITTAL OF THE 2010 UPDATED FLOODPLAIN MANAGEMENT PLAN TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR RATING IN ACCORDANCE WITH THE STANDARDS OF THE COMMUNITY RATING SYSTEM OF THE NATIONAL FLOOD INSURANCE PROGRAM**

Through meeting this component of the process, staff is hereby identifying to the Federal Emergency Management Agency that Hillsborough County is maintaining direction given through the Floodplain Management and Repetitive Flood-loss Areas Plan and is maintaining the County's eligibility to have Federal flood insurance made available to citizens and business operators or owners within the unincorporated county area. The program is valued at protecting structures insured within the Special Flood and Coastal High Hazard Areas. Additionally, through the implementation of the floodplain management program, the County has passed on an annual savings to residents of greater than \$5 million.