THE HILLSBOROUGH COUNTY
COMMUNITY VULNERABILITY STUDY

COMPREHENSIVE PLAN POLICIES FOR SB 1094 PERILS OF FLOOD
THE PROJECT
Meet the planning requirements for:

1. The Perils of Flood Act (SB 1094, 2015)
2. The Local Mitigation Strategy Chapters 3 and 4
THE COMMUNITY VULNERABILITY STUDY

PROJECT PROCESS
PERILS OF FLOOD REQUIREMENTS

Goal 1:
Policy development to reduce coastal flood risk (mapping and planning)
PERILS OF FLOOD REQUIREMENTS

Goal 1:
Policy development to reduce coastal flood risk (mapping and planning)

Goal 2:
Removal of coastal properties from FEMA flood zones (acquisition and constraints)
PERILS OF FLOOD REQUIREMENTS

Goal 1:
Policy development to reduce coastal flood risk (mapping and planning)

Goal 2:
Removal of coastal properties from FEMA flood zones (acquisition and constraints)

Goal 3:
Site development techniques and best practices for reducing flood losses (mitigation)
PERILS OF FLOOD REQUIREMENTS

Goal 4:
Construction requirements (building code)

Goal 5:
Coastal Construction Control Line (CCCL) and Florida Statute

Goal 6:
Encourage local governments to participate with the NFIP CRS
HIGHLIGHTS OF THE VULNERABILITY STUDY

General
1. Physical vulnerability is connected to social vulnerability
2. Social vulnerability is connected to public infrastructure and access
3. Our environment is changing and we will need to change with it. This will require planning and/or distribution of information
HIGHLIGHTS OF THE VULNERABILITY STUDY

Hillsborough County Specific
- Vulnerability in the port areas, and other areas of industry in proximity to the coastal high hazard area (CHHA) and the bay
- Concentration of resources, such as commerce, hotels and cultural facilities (such as art and other museums), in the CHHA.
- Density of residential populations within a category 3 storm surge range (for the year 2045)
- Finite resource of hospital facilities, especially with tier 1 service
- Deficiencies for evacuation and sheltering
HIGHLIGHTS OF THE VULNERABILITY STUDY

Hillsborough County Specific

- Water treatment facilities in the CHHA
- Energy facilities, and their byproducts, in the CHHA
- Access to transportation alternatives, especially for evacuation purposes
- Limited peripheral urban area support, including hotels, commercial clusters and emergency services
- Loss of wetlands
HIGHLIGHTS OF THE VULNERABILITY STUDY

Hillsborough County Specific
- Loss of oyster habitats
- Extent and future impact of seawalls
- Low income populations in older (pre-Florida Building Code) housing
- Future development impacts in the southern part of the county, including capacities for emergency services and response
THE COMMUNITY VULNERABILITY REPORT

Sea-level Rise Vulnerabilities Map

Figure 11: Map analysis showing concentrations of potentially vulnerable areas due to sea-level rise within Hillsborough County.

Storm Surge Vulnerabilities Map

Figure 12: Map analysis showing concentrations of potentially vulnerable areas due to storm surge within Hillsborough County.
THE COMMUNITY VULNERABILITY STUDY

THE COMMUNITY MITIGATION HANDBOOK

http://www.planhillsborough.org/hillsborough-county-community-vulnerability-study/
THE COMMUNITY VULNERABILITY STUDY

STUDIO PROJECT: DESIGNING FOR FUTURE FLOOD

http://www.planhillsborough.org/hillsborough-county-community-vulnerability-study/
## The Community Vulnerability Study

### REDUCE FLOOD RISK THROUGH DEVELOPMENT STRATEGIES

<table>
<thead>
<tr>
<th>GOALS</th>
<th>OBJECTIVES</th>
<th>POLICY</th>
<th>STRATEGIES</th>
<th>PUBLIC COST</th>
<th>PRIVATE COST</th>
<th>BENEFIT</th>
<th>TIME FRAME</th>
<th>EFFORT</th>
<th>DESCRIPTION/CASE STUDY</th>
<th>PROJECT REFERENCES</th>
</tr>
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<tbody>
<tr>
<td>Direct population concentrations and other problematic uses out of the coastal high-hazard area (or Accommodation zone)</td>
<td>Develop design guidelines that promote compact development and redevelopment that maximizes the use of floodways and flood storage within the zone of accommodation</td>
<td>1 IS LOW</td>
<td>5 IS HIGH</td>
<td>5 IS HIGH</td>
<td>Time Frame</td>
<td>LOE</td>
<td>Multi-Hubs</td>
<td>Mult-Hubs; Southeast Florida Regional Climate Change Compact</td>
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<tr>
<td>Encourage development in less flood prone areas</td>
<td>Create purchase of development rights programs</td>
<td>Short Term</td>
<td>3 Mid Term</td>
<td>A Transfer of Development Rights program allows development rights for a parcel to be purchased and then transferred to another parcel, which is then eligible to be developed above the previous allowed density. Transitioning land from private to public ownership is a strategy for managed retreat or relocation.</td>
<td><em>Southeast Florida Regional Climate Change Compact</em></td>
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<td>Implement Rolling Easements in Areas Highly Vulnerable to Sea Level Rise</td>
<td>Reduce the density and intensity of future land use along unprotected shorelines within the Managed Relocation zone</td>
<td>All permits for new development within the managed relocation zone shall include, as a condition of development approval, a covenant or other real property instrument that runs with the land, that requires the abandonment and removal of structures and fixtures once they are inundated for at least __ months per year, or are no longer habitable as determined by the building official, whichever comes first</td>
<td><em>Southeast Florida Regional Climate Change Compact</em></td>
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Within the managed relocation zone, eliminate new investment in public infrastructure likely to be subject to the impacts of sea level rise within the planning horizon. (Within this zone) Prohibit hard shoreline stabilization techniques. Establish an erosion-based minimum setback for shoreline development within the managed relocation zone based upon the (annual coastal erosion rate) x (a planning period representing the economic lifetime of the coastal structure) + (an additional buffer).
<table>
<thead>
<tr>
<th>Categories</th>
<th>Policy</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed by this study with (main ideas highlighted in bold)</td>
<td>Created or defined by Hillsborough County</td>
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</table>

### Mapping and Inventory

<table>
<thead>
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<th>General</th>
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</table>

- **Work in collaboration with the Tampa Bay Regional Resilience Coalition to address climate change and sea level rise.**
- **Support local and regional mapping, modeling, monitoring programs to assure the most current and locally-specific data on climate change vulnerability is available.**
- **Define the surface hydrology of the area to determine flood plain vulnerability and sensitivity, and will determine appropriate protection measures.**
- **Support recurring and continuous development of local integrated models and continuous data collection, to help predict and track the impacts of sea level rise on groundwater levels, saltwater intrusion, and drainage infrastructure through enhanced development and application of local hydrologic models and the use of downscaled climate models.**
- **Establish guidance and criteria for planning, to include sea-level rise projections as established by the Tampa Bay Regional Planning Council and the Climate Science Advisory Panel.**
- **Flood elevation certificates shall continue to be made available for public review.**
- **Flood elevation certificates shall continue to be made available to the public and will be digitally entered into a geographic database to aid with assessment and other resiliency efforts.**
- **Future land use maps will show all land located within the Velocity Zone and the Coastal A Zone, as designated by the Federal Emergency Management Agency.**
- **Update the 100 year stormwater elevation projections in the County 100 year flood map with current and projected conditions for sea level rise for use in stormwater management permitting and other planning processes.**
POLICY RECOMMENDATIONS FOR THE COMPREHENSIVE PLAN

- The Natural Disaster Component (Broward)
- The Hurricane Safety Element (Sanibel)
- Other Human Support Systems (Sanibel)
- The Historic Preservation Element (St. Petersburg)

Next Steps

This document represents the culmination of research, workshops and meetings with staff. The proposed policies were determined to meet Perils of Flood criteria and be consistent with a specific level of commitment. Reference documents, included in the appendix, provide the backdrop for this decision-making process and show a more expansive list of options, and other policy language used by communities in Florida. The first document, the Matrix of Comprehensive Plans (2nd edition), synthesizes policies that are already integrated into plans from other municipalities. This document also shows the Perils of Flood goals that are being met. The second document shows a broad range of mitigation strategies, which includes physical, social, ecological and governmental actions that can be taken to create more resilient communities. These secondary lists can be used as a resource if administrators are interested in comparing proposed policies in this document to a more broad set of options, or to compare language and levels of commitment.

Diagram showing the Community Vulnerability Study process to develop comprehensive plan recommendations for SB 1094: Perils of Flood
THE COMMUNITY VULNERABILITY STUDY

HILLSBOROUGH COUNTY
COMMUNITY VULNERABILITY STUDY (CVS):
RECOMMENDED COMPREHENSIVE
PLAN POLICIES
FOR PERILS OF FLOOD
IN HILLSBOROUGH COUNTY

OCTOBER, 2020

http://www.planhillsborough.org/hillsborough-county-community-vulnerability-study/
**Develop priority areas for land acquisition** based on their strategic capacity to absorb floodwaters and support coastal ecosystem migration in order to reduce loss to flooding.
Consider developing overlays that pertain to sea-level rise or other storm-flood vulnerabilities, such as Adaptation Action Areas, or a vulnerable areas overlays such as zones for protection, accommodation or managed relocation, based on the landward extent of projected sea level rise impacts. Such areas may include policy related to increased design flood elevations, clustering of development or other flood mitigation strategies.
**The County shall encourage**, through the subdivision regulations, **that all new construction of utility lines**, or as improvements are made to utility lines, **be placed underground** to increase community resilience during storm events and to encourage environmental benefits of tree canopy for shade and dissipation of rain water. This requirement shall be subject to all other restrictions in this section. (CME 6.5 addresses this policy in the CHHA)
POLICY QUESTIONS | FOR REVIEW

- *Transfer of development rights* and receiving sites
Promote programs for sellers of real property within the CHHA to provide notice to purchasers that structures or properties are located within a hazard overlay area.

a. Strategy: Show the 1% flood line on all real estate transactions

b. Strategy: Sellers of real property shall provide notice to purchasers if structures and properties have been affected by flooding
Consider the risk of sea-level rise over the life expectancy of capital improvement projects and identify strategies to ensure resilience.
Ensure that sheltering needs are met

- Strategy: Assess sheltering needs and use to evaluate current inventory of facilities.
- Strategy: Consider special needs and pets
- Strategy: Locate major public and community facilities in safe areas and retrofit to emergency standards, where feasible
- Strategy: Seek funds through planning and mitigation grants to identify and upgrade important community buildings to sheltering standards, as feasible
Support the elimination of vertical seawalls and replacement with natural slopes and wetland vegetation along the river banks as existing bulkheads are repaired or replaced. (CARE 27.2)
Participate in the NFIP program, including the CRS, assist local municipalities who participate and make all reasonable efforts to maintain a Community Rating System (CRS) score of 5 or better.
WE NEED YOUR FEEDBACK!

http://www.planhillsborough.org/hillsborough-county-community-vulnerability-study/
WE NEED YOUR FEEDBACK!

1 WEEK TO REVIEW
Comments due by end of Thursday, 10/29

Shawn College (colleges@plancom.org) and/or Brian Cook (brianraycook@usf.edu)

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THE COMMUNITY VULNERABILITY STUDY

NEXT STEPS

1. Incorporate Comments
2. Submit to Lucia Garcys and John Lyons
3. Present to the Planning Commission
4. Present to the Board of County Commissioners