Florida Statewide Regional Evacuation Study Program

Storm Tide Atlas

Lee County

Volume 7-9
Book 5 of 6

Florida Division of Emergency Management
Southwest Florida Regional Planning Council

Southwest Florida Region

Includes Hurricane Evacuation Study
Southwest Florida
STORM TIDE ATLAS

Volume VII-9
Book 5
Lee County

This Book is part of Volume VII of the Statewide Regional Evacuation Study (SRES) Program and one of six county books in the Southwest Florida Storm Tide Atlas Series. Book 1 covers Charlotte County; Book 2 covers Collier County; Book 3 covers Glades County; Book 4 covers Hendry County; Book 5 covers Lee County and Book 6 covers Sarasota County. The Atlas maps identify those areas subject to potential storm tide flooding from the five categories of hurricane on the Saffir Simpson Hurricane Wind Scale as determined by NOAA’s numerical storm surge model, SLOSH (updated 2009).

The Storm Tide Atlas, published in 2010, is the foundation of the hazards analysis for storm tide and a key component of the SRES. The Technical Data Report (Volume I) builds upon this analysis and includes the revised evacuation zones and population estimates, results of the evacuation behavioral data, shelter analysis and evacuation transportation analyses. The Study, which provides vital information to state and local emergency management, forms the basis for county evacuation plans. The final documents with summary information will be published and made available on the Internet (www.swfrpc.org) in June 2010.

The Atlas was produced by the Southwest Florida Regional Planning Council with funding by the Florida Legislature and the Federal Emergency Management Agency through the Florida Division of Emergency Management.

This Atlas was prepared and published by the Southwest Florida Regional Planning Council, 1926 Victoria Ave. Fort Myers, Fl 33901 (239) 338-2550

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CREDITS & ACKNOWLEDGEMENTS

Funding was authorized by the Florida Legislature through House Bill 7121, as a result of the 2004 and 2005 hurricane seasons. Provisions of this bill require the Division of Emergency Management to update all Regional Evacuation Studies in the State and inexorably tied the Evacuation Studies and Growth Management. As a result, this study addresses both Emergency Management and Growth Management data needs. Funds were also provided by the Federal Emergency Management Agency (FEMA) with all money administered through the Florida Division of Emergency Management (FDEM), 2555 Shumard Oak Blvd., Tallahassee, 32399. Web site: www.floridadisaster.org.

Local match was provided by the counties of Charlotte, Collier, Glades, Hendry, Lee and Sarasota.

The Council acknowledges and extends its appreciation to the following agencies and people for their cooperation and assistance in the development of this document:

**National Oceanic and Atmospheric Administration (NOAA/TPC-NHC)** for the SLOSH numerical storm surge model developed by the late Chester L. Jelesnianski, the development of the 2009 Ft Myers Basin under the management of Jamie Rhome, and for the storm tide computation and interpretation provided by the NOAA Storm Surge Modeling team. The National Weather Service, Tampa office for their coordination and support.

**Florida Division of Emergency Management**
- David Halstead, Director
- Sandy Meyer, Hurricane Program Manager
- Richard Butgereit, GIS Manager

**Northeast Florida Regional Council**
- Jeffrey Alexander, Project Manager

**Southwest Florida Regional Planning Council**
- Ken Heatherington, Executive Director
- Daniel L. Trescott, Study Manager
- Daniel Cobb, GIS Analyst

**Florida Emergency Preparedness Association**
- For their support in this statewide effort

**County Emergency Management Agencies**
- Wayne P. Sallade, Director of Charlotte County Emergency Management
- Dan Summers, Director of Collier County Emergency Management
- Angie Snow, Director of Glades County Emergency Management
- Lupe Taylor, Director of Hendry County Emergency Management
- John Wilson, Director of Lee County Emergency Management
- Edward McCrane, Director of Sarasota County Emergency Management
INTRODUCTION

A comprehensive emergency management program requires attention to four (4) key inter-related components: preparedness, response, recovery and mitigation. Preparing and avoiding or reducing potential loss of life and property damage - **preparedness and mitigation** - requires accurate and precise hazard and vulnerability analyses. These analyses are the foundation for evacuation and disaster response planning, as well as the development of local mitigation strategies designed to reduce the community’s overall risk to disasters. This Atlas series provides information to state, county and local emergency management officials and planners for use in hurricane preparedness and coastal management in the Southwest Florida Region including Charlotte, Collier, Glades, Hendry, Lee, and Sarasota counties (Figure 1). It was part of a statewide effort to enhance our ability to respond to a hurricane threat, facilitate the evacuation of vulnerable residents to a point of relative safety and mitigate our vulnerability in the future. The **Statewide Regional Evacuation Study Program** provides a consistent, coordinated and improved approach to addressing the state and regional vulnerability to the hurricane threat.

The specific purpose of this Atlas is to provide maps which depict storm tide heights and the extent of stillwater, storm surge coastal flooding inundation from hurricanes of five different intensities in the Southwest Florida area. The Atlas was prepared by the Southwest Florida Regional Planning Council as part of the **Statewide Regional Evacuation Study Program**. The Study is a cooperative effort of the Florida Department of Community Affairs, Division of Emergency Management, the Florida Regional Planning Councils and the county emergency management agencies.

![Figure 1 The Southwest Florida Region](image)

THE SLOSH MODEL

The principal tool utilized in this study for analyzing the expected hazards from potential hurricanes affecting the study area is the Sea, Lake and Overland Surges from Hurricane (SLOSH) numerical storm surge prediction model. The SLOSH computerized model predicts the storm tide heights that result from hypothetical hurricanes with selected various combinations of pressure, size, forward speed, track and winds. Originally developed for use by the National Hurricane Center (NHC) as a tool to give geographically specific warnings of expected surge heights during the approach of hurricanes, the SLOSH model is utilized in regional studies for several key hazard and vulnerability analyses.
The SLOSH modeling system consists of the model source code and the model basin or grid. SLOSH model grids must be developed for each specific geographic coastal area individually incorporating the unique local bay and river configuration, water depths, bridges, roads and other physical features. In addition to open coastline heights, one of the most valuable outputs of the SLOSH model for evacuation planning is its predictions of surge heights over land into inland areas.

The first Southwest Florida SLOSH model basin was completed in 1979 and represented the first application of SLOSH storm surge dynamics to a major coastal area of the United States. The model was developed by the Techniques Development Lab of the National Oceanic and Atmospheric Administration (NOAA) under the direction of the late Dr. Chester P. Jelesnianski. In December 1990 the National Hurricane Center updated the SLOSH model for the Southwest basin. A major improvement to the model was the incorporation of wind speed degradation overland as the simulated storms moved inland. This duplicated the pressure "filling" and increases in the radii of maximum winds (RMW) as the hurricanes weaken after making landfall.

The newest generation of the SLOSH model basin incorporated in the 2010 Statewide Regional Evacuation Study reflects major improvements, including higher resolution basin data and grid configurations. Faster computer speeds allowed additional hypothetical storms to be run for creation of the MOMs\(^1\) or the maximum potential storm tide values for each category of storm.

**Hypothetical Storm Simulations**

Surge height depends strongly on the specifics of a given storm including, forward speed, angle of approach, intensity or maximum wind speed, storm size, storm shape, and landfall location. The SLOSH model was used to develop data for various combinations of hurricane strength, wind speed, and direction of movement. Storm strength was modeled using the central pressure (defined as the difference between the ambient sea level pressure and the minimum value in the storm's center), the storm eye size and the radius of maximum winds using the five categories of hurricane intensity as depicted in the Saffir-Simpson Hurricane Wind Scale (see Table 1).

\(^1\) Maximum of MEOWs
Table 1  Saffir-Simpson Hurricane Wind Scale

<table>
<thead>
<tr>
<th>Category</th>
<th>Wind Speeds</th>
<th>Potential Damage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>(Sustained winds 74-95 mph)</td>
<td>Very dangerous winds will produce some damage</td>
</tr>
<tr>
<td>Category 2</td>
<td>(Sustained winds 96-110 mph)</td>
<td>Extremely dangerous winds will cause extensive damage</td>
</tr>
<tr>
<td>Category 3</td>
<td>(Sustained winds 111-130 mph)</td>
<td>Devastating damage will occur</td>
</tr>
<tr>
<td>Category 4</td>
<td>(Sustained winds 131-155 mph)</td>
<td>Catastrophic damage will occur</td>
</tr>
<tr>
<td>Category 5</td>
<td>(Sustained winds of 156 mph and above)</td>
<td>Catastrophic damage will occur</td>
</tr>
</tbody>
</table>

The modeling for each tropical storm/hurricane category was conducted using the mid-range pressure difference ($\Delta p$, millibars) for that category. The model also simulates the storm filling (weakening upon landfall) and radius of maximum winds (RMW) increase.

Ten storm track headings (WSW, W, WNW, NW, NNW, N, NNE, NE, E, ENE) were selected as being representative of storm behavior in the West Central Florida regions, based on observations by forecasters at the National Hurricane Center. And for each set of tracks in a specific direction storms were run at forward speeds of 5, 10, 15 and 25 mph. And, for each direction, at each speed, storms were run at two different sizes (20 statute mile radius of maximum winds and 35 statute miles radius of maximum winds.) Finally, each scenario was run at both mean tide and high tide. Both tide levels are now referenced to North American Vertical Datum of 1988 (NAVD88) as opposed to the National Geodetic Vertical Datum of 1929 (NGVD29) used in the previous study.

A total of 12,000 runs were made consisting of the different parameters shown in Table 2.
### Table 2  Southwest Florida Basin Hypothetical Storm Parameters

Directions, speeds, (Saffir/Simpson) intensities, number of tracks and the number of runs.

<table>
<thead>
<tr>
<th>Direction</th>
<th>Speeds (mph)</th>
<th>Size (Radius of Maximum winds)</th>
<th>Intensity</th>
<th>Tides</th>
<th>Tracks</th>
<th>Runs</th>
</tr>
</thead>
<tbody>
<tr>
<td>WSW</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>18</td>
<td>1440</td>
</tr>
<tr>
<td>W</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>14</td>
<td>1120</td>
</tr>
<tr>
<td>WNW</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>16</td>
<td>1280</td>
</tr>
<tr>
<td>NW</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>14</td>
<td>1120</td>
</tr>
<tr>
<td>NNW</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>14</td>
<td>1120</td>
</tr>
<tr>
<td>N</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>10</td>
<td>800</td>
</tr>
<tr>
<td>NNE</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>13</td>
<td>1040</td>
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<tr>
<td>NE</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>17</td>
<td>1360</td>
</tr>
<tr>
<td>ENE</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
<td>17</td>
<td>1360</td>
</tr>
<tr>
<td>E</td>
<td>5,10,15, 25 mph</td>
<td>20 statute miles; 35 statute miles</td>
<td>1 through 5</td>
<td>Mean/High</td>
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<td>TOTAL</td>
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<td></td>
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<td>12,000</td>
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The Grid for the Southwest SLOSH Model

Figure 2 illustrates the area covered by the grid for the Southwest SLOSH Model. To determine the surge values the SLOSH model uses a bipolar elliptical grid as its unit of analysis with 105 arc lengths (1 < I > 105) and 99 radials (1 < J > 99). Use of the grid configuration allows for individual calculations per grid square which is beneficial in two ways: (1) provides increased resolution of the storm surge at the coastline and inside the harbors, bays and rivers, while decreasing the resolution in the deep water where detail is not as important; and (2) allows economy in computation.

The grid size for the Southwest model varies from approximately 0.001 square miles or 1.08 acres closest to the pole (I = 1) to the grids on the outer edges (Gulf of Mexico) where each grid is approximately 15.5 square miles.

Storm Scenario Determinations

As indicated, the SLOSH model is the basis for the "hazard analysis" portion of coastal hurricane evacuation plans. Thousands of hypothetical hurricanes are simulated with various Saffir-Simpson Wind categories, forward speeds, landfall directions, and landfall locations. An envelope of high water containing the maximum value a grid cell attains is generated at the end of each model run. These envelopes are combined by the NHC into various composites which depict the possible flooding. One useful composite is the MEOW (Maximum Envelopes of Water) which incorporates all the envelopes for a particular category, speed, and landfall direction. Once surge heights have been determined for the appropriate grids, the maximum surge heights are plotted by storm track and tropical storm/hurricane category. These plots of maximum surge heights for a given storm category and track are referred to as MEOWs. The MEOWs or Reference Hurricanes can be used in evacuation decision making when and if sufficient forecast information is available to project storm track or type of storm (different landfalling, paralleling, or exiting storms).
The MEOWs provide information to the emergency managers in evacuation decision making. However, in order to determine a scenario which may confront the county in a hurricane threat 24-48 hours before a storm is expected, a further compositing of the MEOWs into Maximums of the Maximums (MOMs) is usually required.

The MOM (Maximum of the MEOWs) combines all the MEOWs of a particular category. The MOMs represent the maximum surge expected to occur at any given location, regardless of the specific storm track/direction of the hurricane. The only variable is the intensity of the hurricane represented by category strength (Category 1-5).

The MOM surge heights, which were furnished by the National Hurricane Center, have 2 values, mean tide and high tide. Mean tide has 0’ tide correction. High tide has a 1’ tide correction added to it. The Storm Tide limits include the adjustment for mean high tide. All elevations are now referenced to the NAVD88 datum.

These surge heights were provided within the SLOSH grid system as illustrated on Figure 2. The range of maximum surge heights (low to high) for each scenario is provided for each category of storm (MOM) on Table 3. **It should be noted again that these surge heights represent the maximum surge height recorded in the county from the storm tide analysis including inland and back bay areas where the surge can be magnified dependent upon storm parameters.**

<table>
<thead>
<tr>
<th>*Storm Strength</th>
<th>Charlotte</th>
<th>Collier</th>
<th>Lee</th>
<th>Sarasota</th>
<th>Lake O 16ft</th>
<th>Lake O 20ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>Up to 5.2</td>
<td>Up to 5.8</td>
<td>Up to 6.1</td>
<td>Up to 5.6</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>1</td>
<td>Up to 7</td>
<td>Up to 8.2</td>
<td>Up to 8.7</td>
<td>Up to 6.9</td>
<td>Up to 21.1</td>
<td>Up to 25</td>
</tr>
<tr>
<td>2</td>
<td>Up to 17</td>
<td>Up to 14.1</td>
<td>Up to 15.5</td>
<td>Up to 15.4</td>
<td>Up to 26.6</td>
<td>Up to 30.6</td>
</tr>
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<td>3</td>
<td>Up to 26</td>
<td>Up to 19.5</td>
<td>Up to 23</td>
<td>Up to 26</td>
<td>Up to 33.2</td>
<td>Up to 35.5</td>
</tr>
<tr>
<td>4</td>
<td>Up to 32.3</td>
<td>Up to 24.5</td>
<td>Up to 27.6</td>
<td>Up to 33.2</td>
<td>Up to 36.4</td>
<td>Up to 37.2</td>
</tr>
<tr>
<td>5</td>
<td>Up to 37.7</td>
<td>Up to 41.9</td>
<td>Up to 41.7</td>
<td>Up to 35.4</td>
<td>Up to 38.9</td>
<td>Up to 40</td>
</tr>
</tbody>
</table>

*Based on the category of storm on the Saffir-Simpson Hurricane Wind Scale

**Surge heights represent the maximum values from SLOSH MOMs
CREATION OF THE STORM TIDE ZONES

The maps in this atlas depict SLOSH-modeled heights of storm tide and extent of flood inundation for hurricanes of five different intensities. As indicate above, the storm tide was modeled using the Maximum of Maximums (MOMs) representing the potential flooding from the five categories of storm intensity of the Saffir/Simpson Hurricane Wind Scale.

Determining Storm tide Height and Flooding Depth

SLOSH and SLOSH-related products reference storm tide heights relative to the model vertical datum, NAVD88. In order to determine the inundation depth of surge flooding at a particular location the ground elevation (relative to NAVD88) at that location must be subtracted from the potential surge height.²

Surge elevation, or water height, is the output of the SLOSH model. At each SLOSH grid point, the maximum surge height is computed at that point.

Within the SLOSH model an average elevation is assumed within each grid square. Height of water above terrain was not calculated using the SLOSH average grid elevation because terrain height may vary significantly within a SLOSH grid square. For example, the altitude of a 1-mile grid square may be assigned a value of 1.8 meters (6 feet), but this value represents an average of land heights that may include values ranging from 0.9 to 2.7 meters (3 to 9 feet). In this case, a surge value of 2.5 meters (8 feet) in this square would imply a 0.7 meters (2 feet) average depth of water over the grid’s terrain. However, in reality within the grid area portion of the grid would be “dry” and other parts could experience as much as 1.5 meters (5 feet) of inundation. Therefore, in order to determine the storm tide limits, the depth of surge flooding above terrain at a specific site in the grid square is the result of subtracting the terrain height determined by remote sensing from the model-generated storm tide height in that grid square.³

Figure 4 Digital Elevation from LIDAR

² It is important to note that one must use a consistent vertical datum when post-processing SLOSH storm surge values

³ Note: This represents the regional post-processing procedure. When users view SLOSH output within the SLOSH Display Program, the system uses average grid cell height when subtracting land.
Storm Tide Post-Processing

The Atlas was created using a Toolset wrapped into ESRI’s ArcGIS mapping application, ArcMap. The surge tool was developed for the Statewide Regional Evacuation Study Program by the Tampa Bay Regional Planning Council, who had used a similar tool for the previous Evacuation Study Update (2006). This tool enabled all regions within the state of Florida to process the SLOSH and elevation data with a consistent methodology.

The tool basically performs the operation of translating the lower resolution SLOSH grid data into a smooth surface resembling actual storm tide and terrain; processing it with the high resolution elevation data derived from LIDAR. The image on the left represents how the data would look as it appears directly from SLOSH Model output.

Processing all the data in the raster realm, the tool is able to digest large amounts of data and output detailed representations of surge inundation.

Figure 5 SLOSH Display

The program first interpolates the SLOSH height values for each category into a raster surface using spline interpolation. This type of interpolation is best for smooth surfaces, such as water and slow changing terrain. The result is a raster surface representing the surge height for a category that can be processed against the raster Digital Elevation Model from the LIDAR. The “dry” values (represented as 99.9 in the SLOSH Model) are replaced by an average of the inundated grids surrounding current processed grid. An algorithm performs this action utilizing the range of values in the current category of storm being processed.

Using this methodology, once the elevation is subtracted from the projected storm tide, the storm tide limits are determined. The output of the tool is a merged polygon file holding all the maximum inundation zones for Tropical Storm through Category 5. The output, depicted in this Storm Tide Atlas is determined consistent with the coastal areas throughout the state. Figure 7 presents a compilation of the Storm Tide Atlas for the region.
Figure 7  Storm Surge for the Southwest Region
VARIATIONS TO CONSIDER

Variations between modeled versus actual measured storm tide elevations are typical of current technology in coastal storm surge modeling. In interpreting the data emergency planners should recognize the uncertainties characteristic of mathematical models and severe weather systems such as hurricanes. The storm tide elevations developed for this study and presented in the *Storm Tide Atlas* should be used as guideline information for planning purposes.

**Storm Tide & Wave Height**

Regarding interpretation of the data, it is important to understand that the configuration and depth (bathymetry) of the Gulf bottom will have a bearing on surge and wave heights. A narrow shelf, or one that drops steeply from the shoreline and subsequently produces deep water in close proximity to the shoreline, tends to produce a lower surge but a higher and more powerful wave. Those regions, like the Southwest Region, which have a gently sloping shelf and shallower normal water depths, can expect a higher surge but smaller waves. The reason this occurs is because a surge in deeper water can be dispersed down and out away from the hurricane. However, once that surge reaches a shallow gently sloping shelf it can no longer be dispersed away from the hurricane, consequently water piles up as it is driven ashore by the wind stresses of the hurricane. Wave height is NOT calculated by the SLOSH model and is not reflected within the storm tide delineations.

**Forward Speed**

Under actual storm conditions it may be expected that a hurricane moving at a slower speed could have higher coastal storm tides than those depicted from model results. At the same time, a fast moving hurricane would have less time to move storm surge water up river courses to more inland areas. For example, a minimal hurricane or a storm further off the coast such as Hurricane Elena (1985), which stalled 90 miles off the Tampa Bay coast for several tidal cycles, could cause extensive beach erosion and move large quantities of water into interior lowland areas. In the newest version of the Southwest SLOSH model, for each set of tracks in a specific direction, storms were run at forward speeds of 5, 10, 15 and 25 mph.

**Radius of Maximum Winds**

As indicated previously, the size of the storm or radius of maximum winds (RMW) can have a significant impact on storm surge especially in bay areas and along the Gulf of Mexico. All of the hypothetical storms were run at two different sizes, 20 mile radius of maximum winds and 35 mile radius of maximum winds.

**Astronomical Tides**

Surge heights were provided by NOAA for both mean tide and high tide. Both tide levels are referenced to North American Vertical Datum of 1988. The storm tide limits reflect high tide in the region.
Accuracy
As part of the Statewide Regional Evacuation Study, all coastal areas as well as areas surrounding Lake Okeechobee were mapped using remote-sensing laser terrains mapping (LIDAR⁴) providing the most comprehensive, accurate and precise topographic data for this analysis. As a general rule, the vertical accuracy of the laser mapping is within a 15 centimeter tolerance. However, it should be noted that the accuracy of these elevations is limited to the precision and tolerance in which the horizontal accuracy for any given point is recorded. Other factors such as artifact removal algorithms (that remove buildings and trees) can affect the recorded elevation in a particular location. For the purposes of this study, the horizontal accuracy cannot be assumed to be greater than that of a standard USGS 7 minute quadrangle map, or a scale of 1:24,000.

POINTS OF REFERENCE

County emergency management agency selected reference points which include key facilities or locations critical for emergency operations. The table below includes the map identification number, descriptions of the selected points and the elevation of the site. The elevation is based on the digital elevation data provided by the LIDAR. It should be noted that if the site is large, elevations may vary significantly. The table also provides the storm tide value from the SLOSH value and the depth of inundation (storm tide value minus the ground elevation) at the site.

⁴ Light Imaging Detection and Ranging
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STORM TIDE ATLAS

The surge inundation limits (MOM surge heights minus the ground elevations) are provided as GIS shape files and graphically displayed on maps in the Hurricane Storm Tide Atlas for the Southwest Florida Region. The Atlas was prepared by Southwest Florida Regional Planning Council under contract to the State of Florida, Division of Emergency Management, as part of this study effort. The maps prepared for the Atlas consist of base maps (1:24000) including topographic, hydrographic and highway files (updated using 2008 county and state highway data). Detailed shoreline and storm tide limits for each category of storm were determined using the region's geographic information system (GIS).

The purpose of the maps contained in this Atlas is to reflect a worst probable scenario of the hurricane storm tide inundation and to provide a basis for the hurricane evacuation zones and study analyses. While the storm tide delineations include the addition of an astronomical mean high tide and tidal anomaly, it should be noted that the data reflects only stillwater saltwater flooding. Local processes such as waves, rainfall and flooding from overflowing rivers, are usually included in observations of storm tide height, but are not surge and are not calculated by the SLOSH model. It is incumbent upon local emergency management officials and planners to estimate the degree and extent of freshwater flooding as well as to determine the magnitude of the waves that will accompany the surge.

Figure 8 provides an index of the map series.

NOTES ON STORM TIDE LIMITS

Historically, the SLOSH storm surge analysis had focused on “average” storm parameters (size and forward speed), although the intensity and angle of approach was modeled to include direct strikes and catastrophic intensity. In the 2010 Regional Evacuation Study Update, 12,000 hypothetical hurricanes were included in the SLOSH suite of storms modeled varying forward speeds and the radii of maximum winds to include the large storm events and different forward speeds. This allowed for the development of a truer picture of the storm surge vulnerability in the region. The five categories of hurricane reflect a “worst probable” storm tide limit for hurricanes holding the wind speed constant (consistent with the Saffir Simpson Hurricane Wind Scale) while varying storm parameters include size, forward speed, and angle of approach.

This has led to some confusion regarding evacuation decision-making since hurricane evacuations are based primarily on storm surge vulnerability. The National Oceanic and Atmospheric Administration (NOAA) is working to enhance the analysis and prediction of storm surge. Direct estimates of inundation are being communicated in the NHC's Public Advisories and in the Weather Forecast Office's (WFO) Hurricane Local Statements. NHC's probabilistic storm surge product, which provides the likelihood of a specific range of storm surge values, became operational in 2009, and the NWS Meteorological Development Laboratory is providing experimental, probabilistic storm surge products for 2010. In addition, coastal weather forecast offices will provide experimental Tropical Cyclone Impacts Graphics in 2010; these include a qualitative graphic on the expected storm surge...
impacts. Finally, the NWS is exploring the possibility of issuing explicit Storm Surge Warnings which could be implemented in the next couple of years. In all of these efforts, the NWS is working to provide specific and quantitative information to support decision-making at the local level. NOAA continues to emphasize that the hurricane forecasts are not 100% accurate and dependent upon many factors.

To the left are the storm tide limits identified for Lee County under the five (5) categories of hurricane on the Saffir Simpson Hurricane Wind Scale. It is important to recognize the following:

- The surge tide values represent the highest surge height elevation above a standard datum (NAVD88) predicted by the model in the entire county and will only be appropriate for selected areas.
- Typically the highest surge tide values are NOT the surge heights predicted at the coast. The highest storm tide values are typically experienced inside bays and up rivers and inlets (water above ground).
- Storm Tide ranges by category of storm are presented on Table 3 on page 13 of this document.
- For surge heights at specific locations, please refer to Table 4 on page 19 which provides the expected storm surge elevation at points of reference and the actual inundation (water depth) at that site.

1 http://www.nhc.noaa.gov/sshws_statement.shtml
Figure 8  Lee County Atlas Map Index
CITY OF BONITA SPRINGS

Lee COUNTY

Collier COUNTY

Hickory Blvd

County Hwy 865

Bay Dr

McLaughlin Blvd

Bonita Beach Rd

Bay Rd

Kings Kew

Forester Dr

Carol Ct

Datum = NAD 1983, 1,000-m USNG

Legend

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within area.
2. Total Storm Tide limits were derived from maximum of maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Map Plate 1

USNG Page 17R MK 12 10

Page 24

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

management implementation are local responsibilities.

Hurricane evacuation decision-making and growth

This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- USNG Page 17R MK 24 10
Map Plate 4
Page 27

Notes:
1. Surge limits are based on
2. Total Storm Tide limits were
3. The Points of Reference are

Produced by Southeast Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones

US National Grid
100,000 m Square ID
MK
Grid Zone Designation
17R
Datum = NAD 1988, 1,000 m USNG

Collier COUNTY
City of Bonita Springs
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

CITY OF BONITA SPRINGS
Lee COUNTY

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

USNG Page 17R MK 12 15
Map Plate 8
Page 30

Datum = NAD 1988, 1,000-m USNG
Mag. Declination 40°31' W Changing by 5' W per yr
Produced by Southeast Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

management implementation are local responsibilities.

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave action.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAVD 1988, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

Total Storm Tide limits were set up.
Maximum surge heights were derived from Maximum still water storm tide height over LIDAR based digital elevation.
Notes:
1. Surge limits are based on still water surge/storm tide height elevation above NAVD88 at high tide with no wave elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Cat
- TS
- 1
- 2
- 3
- 4
- 5

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

US National Grid
Lee County, 2010
Scale - 1:24,000

Notes:
- Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
- Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
- Points of Reference are locations determined to be relevant to emergency management officials.

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Storm Tide Zones

Lee County, 2010

Scale: 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Cat
- TS
- 1
- 2
- 3
- 4
- 5

Producers:
Southwest Florida Regional Planning Council
Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Datum = NAD 1983, 1,000-m USNG

Mag. Declination
- 40°31'W
- Changing by 5' W per yr

Date:
- 2009

Map Plate:
- 17

USNG Page:
- 17R LK 92 20

Page:
- 38

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This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Lee County, 2010
Grid Zone Designation 17R
US National Grid 100,000 m Square LB
Datum = NAVD 1988, 1,000-m USNG

Legend
Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Cat
TS
1
2
3
4
5

Scale - 1:24,000
0 2,000 Feet

Map Plate 18 Page 39
USNG Page 17R LK 96 20
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAVD 1988, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

USNG Page 17R MK 08 20
Map Plate 21
Page 41

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:

- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Cat

Legend:

- Cat
  - TS
  - 1
  - 2
  - 3
  - 4
  - 5

Produced by Southwest Florida Regional Planning Council/Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Management implementation are local responsibilities.

Hurricane evacuation decision-making and growth management officials.

3. The Points of Reference are locations determined to be relevant to emergency management officials.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave action.
2. Total Storm Tide limits were derived from Maximum Storm Surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

Notes:
1. Surge limits are based on still water storm surge heights referenced to NAVD88.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights plus LIDAR based digital elevation model.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

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This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LiDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

USNG Page 17R MK 24 20
Map Plate 25
Page 45
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. Points of Reference are locations determined to be relevant to emergency management officials.

Map Plate 26
USNG Page 17R MK 28 20
Lee County, 2010
Scale 1:24,000

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LiDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Datum = NAD 1983, 1,000-m USNG
US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

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This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Cat
TS
1
2
3
4
5

Datum = NAVD 1988, 1,000-m USNG
US National Grid
100,000-m Square ID LK
Grid Zone Designation 17R

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

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Map Plate 30
USNG Page 17R LK 80 25
Page 50
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones
  - Cat TS 1 2 3 4 5

US National Grid
100,000-m Square ID
LK
Grid Zone Designation 17R
Datum = NAVD 1988, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Diagram Not to Scale

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LiDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

US National Grid
100,000-m Square ID
LK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000-m USNG

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

USNG Page 17R LK 92 25
Map Plate 33
Page 53

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Map Plate 33
USNG Page 17R LK 92 25
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAD 1983, 1,000-m USNG
Grid Zone Designation 17R
Scale - 1:24,000

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG
Please consult with local authorities.

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

**Storm Tide Zones**

**Lee County, 2010**

**Legend**
- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water

<table>
<thead>
<tr>
<th>Scale</th>
<th>1:24,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>USNG Page</td>
<td>17R MK 16 25</td>
</tr>
<tr>
<td>Map Plate</td>
<td>39</td>
</tr>
<tr>
<td>Page</td>
<td>59</td>
</tr>
</tbody>
</table>

**Notes:**
1. Surge limits are based on still water storm-tide height elevation above NAVD88 at high tide within surge zones.
2. Total Storm Tide limits were derived from Maximum of Maximum Surge height over Local based depth elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAVD 1988, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Management implementation are local responsibilities. Hurricane evacuation decision-making and growth locations determined to be relevant to emergency management officials.

This map is for reference & planning purposes only. Maximum storm tide limits were derived from Maximum of still water storm tide height over LIDAR based digital elevation. Maximum surge heights are derived from Maximum of still water storm tide height over NAVD88 setup. Surge limits are based on elevation above NAVD88.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave action. Surge is considered a height above still water elevation. Total Storm Tide limits were derived from Maximum of Maximum surge heights over NAVD88 based digital elevation.
2. The Points of Reference are locations determined to be relevant to emergency management officials.
Lee COUNTY

Corkscrew Rd
Devore Ln
Unnamed Street
Seagrove St
Markward Xing
Wildcat Run Dr
Grande Oak Blvd
Cheetah Ln
Glen Oak Ct

81°44'0"W
81°45'0"W
26°29'0"N
26°28'0"N
26°27'0"N

35
735215m.E
38
38
41
45

768023m.N
68
71
74
81

Datum = NAD 1983, 1,000-m USNG
US National Grid
100,000-m Square ID
Grid Zone Designation
MK
17R

Legend
Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Cat
TS
1
2
3
4
5

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

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Map Plate 41
USNG Page 17R MK 24 25
Page 61
Lee COUNTY

Alico Rd
Corkscrew Rd
Devore Ln Quail Ln
Mallard Ln
Unnamed Street
Driveway
Unnamed Street
Driveway
Unnamed Street
Driveway
Unnamed Street
Driveway

81°41'0"W
81°42'0"W
81°43'0"W
26°29'0"N
26°28'0"N
26°27'0"N

Datum = NAD 1983, 1,000-m USNG

Legend
Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones
Lee County, 2010

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Scale - 1:24,000

0 2,000 Feet

US National Grid
100,000-m Square ID
MK

Grid Zone Designation
17R

Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

Legend

- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from maximum of maximum surge heights over LIDAR based digital elevation. 
3. The Points of Reference are locations determined to be relevant to emergency management officials.

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from maximum surge heights over Lidar-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000-m USNG

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Map Plate 45 Page 65

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum Surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

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This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within area.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be INTERIA emergency management offices.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Map Plate 49
USNG Page 17R LK 92 30
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Please consult with local authorities. Management implementation are local responsibilities.

Hurricane evacuation decision-making and growth locations determined to be still water storm tide height elevation above NAVD88 maximum of maximum surge heights over LIDAR based digital elevation.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

Notes:
- Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave.
- Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
- The Points of Reference are locations determined to be relevant to emergency management officials.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.
Please consult with local authorities.

Management implementation are local responsibilities.

Datum = NAD 1983, 1,000-m USNG

Grid Zone Designation

17R

Magnitude Declination

Changing by

5' W per yr

Date 2009

Notes:

1. Surge limits are based on
old water storm-tide height
elevation above NAVD88
at high tide within area.
2. Total Storm Tide limits were
derived from Maximum of
Maximum surge heights
over LIDAR based digital
elevation.
3. The Points of Reference are
locations determined to be
relevant to emergency man-
agement officials.

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 30
Map Plate 53
Page 73

Legend

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Cat

TS
1
2
3
4
5
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

Management implementation are local responsibilities.

Hurricane evacuation decision-making and growth locations determined to be relevant to emergency management officials.

1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within wave zone.
2. Total Storm Tide limits were derived from Maximum of Maximum surge height over LIDAR based depth elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Notes:

Legend

- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones

Lee County, 2010

Scale: 1:24,000

Units: Feet

0 2,000

USNG Page 17R MK 16 30
Map Plate 55
Page 75

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Datum = NAV 1983, 1,000-m USNG

This map is for reference & planning purposes only: Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Lee County, 2010

Storm Tide Zones

Legend

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<thead>
<tr>
<th>Cat</th>
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<tbody>
<tr>
<td>TS</td>
<td>Tidal Surge</td>
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<tr>
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</tr>
<tr>
<td>2</td>
<td>Evacuation Route</td>
</tr>
<tr>
<td>3</td>
<td>Evacuation Route</td>
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<tr>
<td>4</td>
<td>Evacuation Route</td>
</tr>
<tr>
<td>5</td>
<td>Evacuation Route</td>
</tr>
</tbody>
</table>

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LiDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAV 1983, 1,000-m USNG

Scale - 1:24,000
0 2,000 Feet

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Map Plate 58
Page 78

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Produced by: Southwest Florida Regional Planning Council
Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Map Plate 60
Page 80

Datum = NAD 1983, 1,000-m USNG
Changing by 5' W per yr Date 2009

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

US National Grid
100,000-m Square ID
LK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

Notes:
1. Surge limits are based on still water storm tide height above NAVD88 at high tide within 24hr
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over NAVD88 based digital elevation
3. The Points of Reference are locations determined to be relevant to emergency management

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Cat
  - TS
  - 1
  - 2
  - 3
  - 4
  - 5

Lee County, 2010

Scale - 1:24,000

USNG Page 17R LK 96 35

Map Plate 67
Page 85

Produced by Southeast Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities. Management implementation are local responsibilities. Hurricane evacuation decision-making and growth locations determined to be elevation. Maximum surge heights derived from Maximum elevation above NAVD88 still water storm tide height setup.

1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within wave period.
2. Total Storm Tide limits were derived from maximum of maximum surge height over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Legend
- Cat
- TS
- 1
- 2
- 3
- 4
- 5

Notes:
1. Storm Tide Zones are based on still water storm surge height above NAVD88 at high tide within a zone.
2. Total Storm Tide limits were derived from Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Please consult with local authorities. This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

Grid Zone Designation
17R

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 35

Map Plate 70

Page 88
Storm Tide Zones
Lee County, 2010
Map Plate 73
Page 91

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Surge Limits
- Grid Zone Designation

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide and no wave setup.
2. Total Storm Tide limits were derived from Maximums of Maximums surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency managers.

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAV 1983, 1,000-m USNG
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximums of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

US National Grid
100,000-m Square ID
MK

Grid Zone Designation
17R

Datum = NAD 1983, 1,000-m USNG

Map Plate 74
Page 92

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Hurricane evacuation decision-making and growth locations determined to be relevant to emergency management officials.

1. Surge limits are based on old water storm tide height elevation above NAVD88 at high tide within 6 years since the last event.
2. Total Storm Tide limits were derived from Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be robust to emergency management offices.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Surge limits are based on still water storm tide height elevation above NAVD88 or high tide within wave setup.

1. Surge limits were derived from Maximum storm tide heights using NAVD88 based digit elevation.

2. The Points of Reference are locations determined to be relevant for emergency management officials.

Legend

Cat

TS
1
2
3
4
5

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

0 2,000

US National Grid

100,000 m Square ID
MK

Grid Zone Designation

17R

Datum = NAVD 1988, 1,000 m USMG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

management implementation are local responsibilities.

This map is for reference & planning purposes only.

Notes:
1. Surge limits are based on still water maximum height
   elevation above NAVD88 at high tide without wave
   ebb.
2. Total Storm Tide limits were derived from Maximum
   Maximum surge heights
   based on wave elevation
   on.
3. The Points of Reference are locations determined to
   be redundant

Legend

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 40 35
Map Plate 78
Page 96

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Lee COUNTY

Diagram Not to Scale

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones
Lee County, 2010

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

US National Grid
100,000-m Square ID
LK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Map Plate 81
Page 98
Lee COUNTY

32
Lee County, 2010

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digit elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Existing Water

Datum = NAD 1983, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

US National Grid
100,000-m Square ID
LK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

Map Plate 83
Page 100

Produced by Southeast Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Surge limits are based on low water storm tide height elevation above NAVD88 at high tide within wave action.

1. Surge limits are based on low water storm tide height above NAVD88.
2. Total Storm Tide limits were derived from Maximum of Maximum surge height above NAVD88 based on depth elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAD 1983, 1,000-m USNG

Grid Zone Designation: 17R

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones
- Ts
- 1
- 2
- 3
- 4
- 5

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Hurricane evacuation decision-making and growth management implementation are local responsibilities. This map is for reference & planning purposes only.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within 24 hours after high tide.
2. Total Storm Tide limits were derived from Maximum of Maximum surge height over LIDAR-based design elevation.
3. The points of reference are locations determined to be relevant to emergency management efforts.
The Points of Reference are elevation.

Maximum surge heights derived from Maximum of 1. Surge limits are based on
Existing Water

Surge limits are based on

Changing by

Notes:

Surge limits are based on

Magnitude Declination

US National Grid

Grid Zone Designation

Datum = NAD 1983, 1,000-m USNG

Lee COUNTY

Lee County, 2010

Scale - 1:24,000

 Produced by Southwest Florida Regional Planning Council (Florida Division of Emergency Management), 2009-2010

Legend

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 40

Map Plate 87

Page 104

Notes:

1. Surge limits are based on

2. Total Storm Tide limits were

3. The Points of Reference are

Please consult with local authorities.

Datum = NAD 1983, 1,000-m USNG

US National Grid

Grid Zone Designation

Lee COUNTY

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 40

Map Plate 87

Page 104

Legend

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 40

Map Plate 87

Page 104

Legend

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 08 40

Map Plate 87

Page 104

Legend

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water
Storm Tide Zones

Lee County, 2010

Scale: 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Datum = NAD 1983, 1,000-m USNG

Scale - 1:24,000

Map Plate 17R MK 16 40
Page 106
Please consult with local authorities.

The Points of Reference are elevation.

1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave over LIDAR based digital elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAV 1988, 1,000-m USNG

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave over LIDAR based digital elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

USNG Page 17R MK 24 40
Map Plate 91
Page 108
Hurricane evacuation decision-making and growth management officials.

3. Storm Tide Zones

Legend

- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within 0.001 m.
2. Total Storm Tide limits were derived from Maximum of Surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend

- Cat
- TS
- 1
- 2
- 3
- 4
- 5

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010.
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from maximum of maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Cat
- TS
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

US National Grid
100,000 m Square ID
LK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000 m USNG
Map Plate 97
Page 113

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Lee County, 2010

Storm Tide Zones

Legend

- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water

Cat

1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Scale - 1:24,000

Notes:

US National Grid

100,000-m Square ID

LK

Grid Zone Designation

17R

Datum - NAVD 1988, 1,000-m USNG

Map Plate 98

Page 114

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map is for reference and planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Legend:
- Cat
  - TS
  - 1
  - 2
  - 3
  - 4
  - 5

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Datum = NAD 1983, 1,000-m USNG
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

This map is for reference & planning purposes only.

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**Storm Tide Zones**

**Lee County, 2010**

Scale - 1:24,000

<table>
<thead>
<tr>
<th>Cat</th>
<th>Legend</th>
</tr>
</thead>
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<td>TS</td>
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<td>City Limits</td>
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<tr>
<td>2</td>
<td>Evacuation Route</td>
</tr>
<tr>
<td>3</td>
<td>Existing Water</td>
</tr>
</tbody>
</table>

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management/evacuation.

Produced by Southwest Florida regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones

Lee County, 2010

Scale: 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave action.
2. Total Storm Tide limits were derived from maximum of Maximum surge height over NAVD88 based on wave action.
3. Heights shown are referenced to mean sea level by the U.S. Army Corps of Engineers.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Cat
- TS
- 1
- 2
- 3
- 4
- 5

US National Grid
100,000-m Square ID
MK

Grid Zone Designation
17R

Datum = NAVD 1988, 1,000-m USNG

This map is for reference and planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

Datum = NAD 1983, 1,000-m USNG

Surge limits are based on old water storm-tides height elevation above NAVD88 at high tide within zone.

Total Storm Tide limits were derived from Maximum of Maximum surge height over LIDAR based digital elevation.

The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010

Scale: 1:24,000

USNG Page 17R MK 08 45
Map Plate 105
Page 121
- Please consult with local authorities.
- Management implementation are local responsibilities.
- Hurricane evacuation decision-making and growth management officials.

Notes:
1. Surge limits are based on still water storm-tide height elevation above NAVD88 at high tide with wave.
2. Total Storm Tide limits were derived from Maximum Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be reliable for evacuation management officials.
Please consult with local authorities.

Hurricane evacuation decision-making and growth management implementation are local responsibilities.

Legend

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<tr>
<th>Cat</th>
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<td>TS</td>
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<tr>
<td>1</td>
<td>Evacuation Route</td>
</tr>
<tr>
<td>2</td>
<td>City Limits</td>
</tr>
<tr>
<td>3</td>
<td>Existing Water</td>
</tr>
<tr>
<td>4</td>
<td>HOSPITAL</td>
</tr>
<tr>
<td>5</td>
<td>Storm Tide Zones</td>
</tr>
</tbody>
</table>

Notes:
1. Surge limits are based on still-water storm tide height elevation above NAVD88 at high tide with no wave elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be reliable for emergency management efforts.

Datum = NAD 1983, 1,000-m USNG

Scale - 1:24,000

Map Plate 109
Page 125

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Management implementation are local responsibilities.

Hurricane evacuation decision-making and growth

This map is for reference & planning purposes only.

Grid Zone Designation

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
Cat

TS
1
2
3
4
5

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water
Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave elevation.
2. Total Storm Tide Limits were derived from Maximum of Maximum surge heights over USGS based degree elevation.
3. The Points of Reference are locations determined to be reliable emegency management facilities.
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend

Legend

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend

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Legen
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend

Cat
1
2
3
4
5

Legend

Ref Point
TS
HOSPITAL
City Limits
Evacuation Route

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over Lidar-based digital elevation.
3. Points of Reference are locations determined to be relevant to emergency management.

Datum = NAVD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Lee COUNTY

Cayo Costa State Park
Road A
82°13'0"W 82°14'0"W
26°42'0"N 26°41'0"N 26°40'0"N
577735m.E 81 84 87
50 53 56 59 63
580 50
58 68 71 74 77

Datum = NAD 1983, 1,000-m USNG
US National Grid
100,000-m Square ID
LK
Grid Zone Designation
17R

Legend
Cat
TS
1
2
3
4
5

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Map Plate 115
Page 130

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
CITY OF CAPE CORAL

Lee COUNTY

Mankato Dr
Oakshire Dr
Pinecrest Dr
Unnamed Street
Cedelia Rd

82°5'0"W
82°6'0"W
82°7'0"W

26°42'0"N
26°41'0"N
26°40'0"N

Datum = NAD 1983, 1,000-m USNG

USNG Page 17R LK 88 50
Map Plate 118
Page 133

Legend

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Not to Scale

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

Management implementation are local responsibilities.

Hurricane evacuation decision-making and growth management officials.

The Points of Reference are locations determined to be relevant to emergency management officials.

1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within area.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digitization elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Notes:

Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Storm Tide Zones
Lee County, 2010
Scale: 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Zones
- Cat

US National Grid
100,000-m Square ID
LK
Grid Zone Designation 17R

USNG Page 17R LK 92 50
Map Plate 119
Page 134

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
management implementation are local responsibilities. Hurricane evacuation decision-making and growth locations determined to be Maximum surge heights over LIDAR based digital still water storm tide height Maximum Storm Tide limits were setup.

Notes:
1. Surge limits are based on old water storm tide height elevation above NAVD88 at high tide with no wave
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

USNG Page 17R LK 96 50
Map Plate 120
Page 135

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Hurricane evacuation decision-making and growth

Legend

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevations above NAVD88 at high tide within wave action.
2. Total Storm Tide Limits were derived from Maximum of Maximum surge heights over U.S. Army Corps of Engineers normal estimation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Legend
Cat
TS
1
2
3
4
5

Existing Water

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

Hurricane evacuation decision-making and growth management officials.

The Points of Reference are locations determined to be relevant to emergency management officials.

2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevations.

3. The Points of Reference are locations determined to be relevant to emergency management officials.

Notes:
1. Surge limits are based on still water surge tide height elevation above NAVD88 at high tide within wave energy.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevations.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- US National Grid

Storm Tide Zones
Lee County, 2010

Scale - 1:24,000

0 2,000 Feet

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAV 1983, 1,000-m USNG

This map is for reference & planning purposes only; Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

Management implementation are local responsibilities.

This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

US National Grid
100,000-M Square ID
MK
Grid Zone Designation
17R

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
- Ref Point

HOSPITAL
City Limits
Evacuation Route
Existing Water

Notes:
1. Surge limits are based on still water storm-tide height elevation above NAVD88 or high tide when no wave energy.
2. Tabulated Storm Tide limits were derived from Maximum surge heights over LIDAR based Digital Elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Please consult with local authorities.

Management implementation are local responsibilities.

This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

Datum = NAD 1983, 1,000-m USNG

Notes:
1. Surge limits are based on still-water storm tide height elevation above NAVD88 at high tide within area.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over USGS based depth.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones

Lee County, 2010
Scale - 1:24,000

US National Grid
17R MK 12 50
Map Plate 124
Page 139

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
1. Surge limits are based on old water storm tide height elevation above NAVD 88 at high tide without wave.

2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.

3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend:
- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zone

Notes:
- 1
- 2
- 3
- 4
- 5

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Lee County, 2010

Map Plate 125

Page 140

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Hurricane evacuation decision-making and growth management implementation are local responsibilities.

This map is for reference & planning purposes only.
Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

Evacuation decision-making and growth management implementation are local responsibilities.

This map is for reference & planning purposes only.

Datum = NAD 1983, 1,000-m USNG

Grid Zone Designation
17R

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

US National Grid
100,000-m Square ID
MK

Lee COUNTY
Hendry COUNTY

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Please consult with local authorities.

The Points of Reference are:

1. Storm Tide Zones
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Notes:
1. Surge limits are based on still water storm surge height elevation above NAVD88 at high tide without wave.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Steady evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

**Notes:**
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

**Legend:**
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

**Map Plate:** 136

**USNG Page:** 17R MK 00 55

**Scale:** 1:24,000

**Legend Cat:**
- TS
- 1
- 2
- 3
- 4
- 5

**Datum:** NAD 1983, 1,000-m USNG

**Produced by:** Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities. Management implementation are local responsibilities. Hurricane evacuation decision-making and growth relevant to emergency management officials. Maximum surge heights over LIDAR based digital elevation. 3. The Points of Reference are locations determined to be reliable for emergency management officials.

Notes:
1. Surge limits are based on still water surge height elevation above NAVD88 at high tide with no wave.
2. Total Storm Tide limits were derived from Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be reliable for emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones

Lee County, 2010
Scale - 1:24,000

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Please consult with local authorities.

This map is for reference & planning purposes only.

Legend:
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Storm Tide Zones

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide and/or wave elevation.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digitized elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Lee County, 2010

Scale: 1:24,000

US National Grid
100,000m Square ID
MK

Grid Zone Designation
17R

Datum = NAD 1983, 1,000-m USNG

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This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

**Storm Tide Zones**

Lee County, 2010

Scale - 1:24,000

<table>
<thead>
<tr>
<th>Cat</th>
<th>Legend</th>
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</thead>
<tbody>
<tr>
<td>TS</td>
<td>Ref Point</td>
</tr>
<tr>
<td>1</td>
<td>HOSPITAL</td>
</tr>
<tr>
<td>2</td>
<td>City Limits</td>
</tr>
<tr>
<td>3</td>
<td>Evacuation Route</td>
</tr>
<tr>
<td>4</td>
<td>Existing Water</td>
</tr>
<tr>
<td>5</td>
<td>Existing Water</td>
</tr>
</tbody>
</table>

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAD83, 1,000-m USNG

Produce by Southwest Florida Regional Planning Council & Florida Division of Emergency Management, 2009-2010
Diagram Not to Scale

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R
Datum = NAD 1983, 1,000-m USNG

Enhanced Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- Evacuation Route
- City Limits
- Existing Water
- Standing Water
- Storm Tide Zones
- HOSPITAL

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Lee COUNTY

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Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

US National Grid
100,000-m Square ID MK
Grid Zone Designation 17R
 Datum = NAVD 1988, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Driveway
- Storm Tide Zones

Lee County, 2010
Scale - 1:24,000

USNG Page 17R MK 28 55
Map Plate 143
Page 157

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LiDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Cat
- TS
- 1
- 2
- 3
- 4
- 5

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R
Datum = NAD 1983, 1,000-m USNG

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by South Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
This map & is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Charlotte COUNTY
Lee COUNTY

Charlotte COUNTY

Lee COUNTY

CITY OF CAPE CORAL

Legend

Ref Point
HOSPITAL
City Limits
Evacuation Route
Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide within wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over Digital Elevation Models.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

0 2,000 Feet

USNG Page 17R LK 92 60
Map Plate 149
Page 163
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water
- Map Plate: 151
- USNG Page: 17R MK 00 60
- Scale: 1:24,000

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water

Datum = NAD 1983, 1,000-m USNG
Scale - 1:24,000

Lee County, 2010

Map Plate 152
Page 166

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

**Notes:**
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

**Legend:**
- **Ref Point**
- **HOSPITAL**
- **City Limits**
- **Evacuation Route**
- **Existing Water**

**Legend Codes:**
- Cat 1
- Cat 2
- Cat 3
- Cat 4
- Cat 5

**Datum = NAD 1983, 1,000-m USNG**

**US National Grid**
- 100,000-m Square ID
- MK 17R

**Grid Zone Designation**
- 17R MK 08 60

**Scale:** 1:24,000

**Map Plate:** 153

**Page:** 167

**Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010**
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total storm tide limits were derived from maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management efforts.

Legend
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Datum = NAD 1983, 1,000-m USNG

Scale - 1:24,000

US National Grid
100,000-m Square ID
MK
Grid Zone Designation
17R

Mag. Declination
40 31'W
Changing by 5' W per yr
Date 2009

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Charlotte COUNTY

Lee COUNTY

Nalle Rd

Saint Vincent Ave

Beal Ln

Baughman Ln

Busbee Ln

FPL Maintenance Rd

Shirley Ln

81°46'0"W

81°47'0"W

81°48'0"W

26°46'0"N

26°47'0"N

26°48'0"N

Datum = NAD 1983, 1,000-m USNG

US National Grid

100,000-m Square ID

MK

Grid Zone Designation

17R

Note:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums storm surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend

Cat

Ref Point

HOSPITAL

City Limits

Evacuation Route

Existing Water

Storm Tide Zones

Lee County, 2010

Scale - 1:24,000

Feet

USNG Page 17R MK 20 60

Map Plate 156

Page 170

Produced by Southeast Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums storm surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.
Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide without wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LiDAR-based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Datum = NAD 1983, 1,000-m USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.
Storm Tide Zones
Lee County, 2010
Scale - 1:24,000

Legend
- Ref Point
- HOSPITAL
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximums surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Diesal = NAVD 1988, 1,000-M USNG

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010
Lee County, 2010

Map Plate 159

Legend
- Ref Point
- Hospital
- City Limits
- Evacuation Route
- Existing Water

Notes:
1. Surge limits are based on still water storm tide height elevation above NAVD88 at high tide with no wave setup.
2. Total Storm Tide limits were derived from Maximum of Maximum surge heights over LIDAR based digital elevation.
3. The Points of Reference are locations determined to be relevant to emergency management officials.

Datum = NAD 1983, 1,000-m USNG

Scale - 1:24,000

Feet

US National Grid
100,000-m Square ID
MK
Grid Zone Designation 17R

Diagram Not to Scale

This map is for reference & planning purposes only. Hurricane evacuation decision-making and growth management implementation are local responsibilities. Please consult with local authorities.

Produced by Southwest Florida Regional Planning Council for Florida Division of Emergency Management, 2009-2010