CFPUD has completed a ground survey for all parts of the District that appeared to be located within the 100-year FLOODPLAIN. The survey covered all the District subdivisions. The criteria was to collect data on any property within the District boundaries that fell within the 100-year FLOODPLAIN line.
When FEMA and HCFCD conducted a county-wide survey for their re-mapping project, most of the data was collected using LIDAR, which is an optical remote sensing technology similar to radar technology, but only uses light waves (or laser) instead of radio waves, to provide ground elevation information. One of the shortfalls of LIDAR is that any data collected in an area of cloud or ground cover (trees, heavily wooded areas, etc…) had to be adjusted mathematically to accurately reflect the ground conditions. Therefore, in several instances within the County, landowners, Municipalities have completed old-fashioned Topo surveying to confirm or correct the data obtained using LIDAR. This data was used in several cases to adjust the FLOODPLAIN maps, or to file for revisions of those maps.
To start out, I would like to make some clarifications on important acronyms and words used whenever drainage and flooding issues are discussed, especially during this presentation.

At any time, you have a question, please stop me so we can address it in its context.

I am sure all of you have heard of FEMA, which regulates all emergency and disaster response for the Federal govt, but also is responsible for issuing the FIRM and setting the Flood Insurance Rates.

TSARP became a household code name in the last 5-6 years because of the project undertaken by FEMA in Harris County, to remap and accurately determine where flooding occurs. This is the project where LIDAR was used extensively. Then, experienced hydrologists working for FEMA, HCFCD, and several specialized consultants took the data collected and modeled the streams, bayous, channels, creeks, within the County and developed areas of flooding ranging in severity from FLOODWAY designation, where flooding occurs and water flows in almost any rain event, to zones where the models determined there was no chance of flooding in over 500 years.

Of course HCFCD is the regulatory and management district for Harris County.

You have heard and will hear a lot about 100-year floodplain, or as it is called now 1% chance flood zone. Very simply put, this is any zone where every time it rains, there is a 1% chance for a flood to occur. It used to be assumed that these zones will only flood once every 100 years, which is basically the same things just articulated differently.

The importance of the 1% chance or the 100-year floodplain is that it controls the development of properties, and the insurance risk threshold.

In other words, any proposed development can obtain a permit from HC only if it is outside the zone designated as 1% chance. Equally important, especially for individuals, is that any bank or mortgage company will require its client to obtain flood insurance if the property is found to be within this same zone.

Another related term you hear is Floodway. This is the area of and around any channel that is expected to carry water as part of any given rain event. In other words, the Floodway represents Flood-prone areas at any given time and cannot be used for any development. Usually, developers or governments use Floodway areas for Parks, Sports fields, etc… with the understanding that any time
When FEMA issued its latest maps, which are available to the public online through various resources (I have handouts with several resources listed that you can take home with you), this is what the maps look like on the TSARP interactive website.

The blue lines are waterways, Cypress Creek, Dry Gully, etc..

The dark shading represents the floodway zone

The blue shading represents the 100-year FLOODPLAIN or the 1% chance zone

The light blue is the 500-year flood zone or a zone where the chance of flooding is 0.2%

Un-shaded areas are outside any flood risk zones.

There are designation within certain shaded areas like Zone AE, Zone X, Zone V, etc...
The official maps issued in hard copy look like this.
The red line shows the approximate limits of the northern part of CFPUD
In this slide, the red line shows the approximate limits of the southern part of CFPUD.
By combining two maps, we can delineate the district onto the flood maps. As you can see, the majority of the properties within CFPUD are un-shaded. By Cypress Creek along Cypresswood and Champion Forest Drive are shaded areas both light and dark and cross-hatched areas which represent the floodway. Apparently a good part of Champion Forest sections 11 and 12 (the villas) are within the latest 100-year FLOODPLAIN.
CYPRESS FOREST  P.U.D.

DISCLAIMER
Cypress Forest PUD is **NOT** the governmental entity that is responsible for administering the floodplain in Harris County.

Harris County is the Floodplain Administrator for the Cypress Creek Watershed.

However, in light of the recent revisions to the floodplain maps in Harris County & in particular as they affect Cypress Creek, Cypress Forest PUD has studied the effect of the new floodplain maps on properties within Cypress Forest PUD.

Cypress Forest PUD is providing the information to property owners in the District so that affected property-owners have additional information in dealing with Harris County Flood Control and FEMA.

So far we have showed the FEMA maps and covered general information pertaining to flood prone zones.

Now I will discuss our findings or results of the actual on the ground field survey. Before we start I will quickly go over the disclaimer statement.
The Yellow lots represent lots with Slab elevation in the Flood Plain. These slabs are at an elevation lower than the FEMA designated Flood Plain elevation in this immediate area. The Pink lines with numbers (113 – 114) represent the 1% Chance Flood Plain (100-year) elevations in certain areas as per the TSARP analysis. In the vicinity of these sections, any property that lies at an elevation below these elevations would have a 1% chance of flooding anytime it rains. Please note that Water Plant No. 2 in the Golf Course, although designated in Yellow as in the Flood Plain, is elevated enough where all equipment is actually outside the Flood Plain.

The Blue lots represent lots with Slab elevation OUT OF the Flood Plain, as confirmed by the field surveys. However, according to the FEMA maps, these lots are part of the 1% Chance Flood Plain (100-year) areas as per the TSARP analysis. Although the maps show these lots as in the Flood Plain, owners can obtain a Certificate from a Registered Surveyor to prove otherwise, which could be beneficial with insurance companies and lenders.

The bright Red line represents the recently adopted 1% Chance (100-year) flood Plain limits.

The Blue Dotted line represents the OLD 100-year Flood Plain limits.

The Dark Maroon line represents the Floodway limits.
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A closer look at some lots within the Flood Plain with actual field-obtained elevations. NG represents Natural Ground, FF represents Finished Floor (Slab), and BC represents Back of Curb (Top pf the Curb in the street).
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IF THE FIRST FLOOR ELEVATION OF YOUR HOME IS LOCATED ABOVE THE BASE FLOOD ELEVATION, PROVIDING AN ELEVATION CERTIFICATE TO YOUR INSURANCE AGENT MAY RESULT IN SIGNIFICANT SAVINGS
RESOURCES

• FEMA MAP SERVICE CENTER  
  http://msc.fema.gov

• TSARP INTERACTIVE MAPPING  
  http://www.tsarp.org

• HARRIS COUNTY FLOOD CONTROL  
  http://www.hcfcd.org

• FOR ELEVATION CERTIFICATES  
  CONTACT THOMAS LAND SURVEYING  
  PHONE: 281.440.7730