



## Filled Up: Elevation in Hernando County Prevents Flood Damage

**Hernando County, FL - BROOKSVILLE, Fla.** - Samantha Vitalone and her family live on a 68-acre tract of land in the City of Brooksville, Florida. Her father, Alphonse Alesso, had purchased the property in 2003 with the intent of developing it as a home and thoroughbred horse raising facility. Alesso decided to design and build a new house, as well as add a much larger 30-stall barn.

Prior to construction of the new house, Alesso was informed by Hernando County officials that he had to ensure the house was elevated to the required Base Flood Elevation (BFE) for the area. The Base Flood is the flood having a one percent chance of being equaled or exceeded in any given year (commonly referred to as the 100-year flood). The BFE is the height to which a structure must be elevated to avoid damages from the one percent flood. This terminology can often be confusing, as many people assume this means that such a flood will only occur once every 100 years. It actually means that there is a one percent chance or greater that a flood zone will experience flooding that equals or exceeds its boundaries in that given year.

Construction on the new house began in 2004, and the original concrete foundation was laid, but before building commenced, one of the local residents gave Alesso some disturbing news.

"A neighbor that lives down the road came by and saw what my father was doing," said Vitalone. "He told him that it had flooded in that area before, and that my father might want to think about raising the foundation a little higher."

Alesso considered the neighbor's advice and did some additional research. He decided to take precautions, demolish the original foundation and lay a new one; this time over a foot higher than the elevation required by Hernando County ordinances. To raise the house he used fill dirt, which is typically composed of subsoil, containing little or no organic material, and often quantities of sand, rocks, or stones. The fill is then formed into a flattened mound and compacted through the use of an industrial compactor.

Construction was underway when the 2004 Florida hurricane season subjected the state to numerous storms and hurricanes. Two of those storms passed directly over Hernando County, depositing significant amounts of floodwater in their wakes. Floodwater was reported to have reached the cab of a dump truck parked on the Alesso property at one point. The new foundation and construction remained untouched, however, sitting well above the reported flood levels.

In 2010, Vitalone and her family moved into the home built by her father. In June 2012, Tropical Storm Debby formed in the Gulf of Mexico and proceeded to crawl at a snail's pace across Florida. The slow speed at which Debby traveled allowed the storm to deposit an incredible amount of rainfall over several days. By the time Debby had passed over Florida and moved into the Atlantic, at least 24 inches of rain had fallen in some of the most heavily affected areas.

The night of June 23, 2012, Vitalone and her family were at home watching for news of possible tornado activity in their area. Although it was raining hard, nothing else seemed amiss, and even some of her horses were outside in the foul weather enjoying a late-night graze. At 1:30 a.m., as the family prepared to turn in, the grass and pastures were still visible through the windows. When they were awakened at 4 a.m. by a phone call from one of her neighbors, looking out the window Vitalone knew the situation had changed. All she could see was water.

While they slept several feet of water had risen on the Vitalone property. Over the next several hours the Vitalone family secured the house and animals before evacuating. They were forced to remain out of the house



for two weeks. During that time, they would periodically return to her property to check on things and make sure all was well with her house and animals.

"Nobody can understand just how much water there was," said Vitalone. "You can tell somebody you have a flood, but it's hard for them to grasp the intensity of it. I mean, we had to use a canoe to get around up here for a week."

The one consolation for the Vitalones during this ordeal was the fact that their house was completely undamaged. Despite the vast amount of water that inundated their property, at no point was the house itself in danger of flooding. Thanks to the precautions taken by her father, the house remained safe.

In addition to the obvious benefit of experiencing no flood damages due to the elevation, Vitalone also realizes a financial value in the form of reduced flood insurance costs. Because her father chose to build over a foot higher than Hernando County's BFE, Vitalone pays a significantly reduced annual premium for the flood coverage on her home.

"The elevation was a pretty big expense at the time they did it, but in the long run, it was worth it," said Vitalone. "I've been dreaming about being here full time for the past two years, and this was the first time my family was just coming here to relax. If this house had flooded, I would have had to fold. I would've been done."

One consideration that must be taken into account prior to conducting a fill-based structural elevation within the floodplain is the potential impact the project might have on neighboring properties and buildings. Whenever new material is added to the floodplain there is always the risk that high water will be pushed away from the elevated structure only to cause damage to someone else's property. Check with your local building officials or floodplain managers to identify any regulations or issues regarding a potential elevation project.