

Video: Types of Floods

A storm surge is a coastal flood usually associated with a hurricane. The intense low pressure at the center, or eye, of the storm sucks water towards the storm center. As the storm moves on land, this elevated water surges on land and creates flooding. The wind driven surge is usually larger than the pressure driven surge. A great deal of hurricane damage is the result of storm surge.

This image shows damage caused by the storm surge from hurricane Katrina that hit New Orleans in 2005.

Flash floods happen very quickly. This type of flood usually occurs after a strong storm with lots of precipitation, in areas where the soil is already saturated or too dry to absorb much run off. The run off from the storm collects rapidly and flows downhill at a high speed. Flash floods also happen as the result of the collapse of a natural or man made dam. The speed and depth of water in a flash flood is very dangerous. Flash floods also pick up and carry large pieces of debris. This debris is very dangerous to people in the path of the flash flood.

This image shows the incredible damage from the Johnstown Flash Flood that took place in Johnstown, Pennsylvania in 1889.

As more and more land is paved over and developed, the risk of urban flooding has increased significantly. When natural flood plains and wetlands are no longer able to channel and absorb runoff, the water has to end up somewhere. The lack of natural drainage for runoff in developed areas results in urban floods. City drainage systems do not always have the capacity to channel and carry away high intensity precipitation.

In May of 2010, heavy rains overwhelmed the drainage systems in southwestern Tennessee. This resulted in significant urban flooding. This image shows road damage as a result of this urban flood.