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What's Your Potential Flood Risk?

A Checklist for Property Owners



Flood risk. It's a common buzzword, yet few understand its full meaning beyond the obvious "risk of flooding." First, it's important to select the property under consideration and identify potential sources of risk. For regulatory purposes, risk is often referenced by a FEMA Flood Insurance Risk Map (FIRM). This map is one source of risk, but there are many others, some of which could occur more frequently than the risks represented by a FIRM.

Each property has unique risks associated with it because of numerous factors and sources. Likewise, each rainstorm and flooding event is unique. Acknowledging potential flooding sources is key to understanding the risk associated with a property.

Each "property," in however you define "property," has a unique flood risk based on a multitude of flooding sources. There are a variety of factors that property owners must evaluate when determining their level of risk. Experts at Walter P Moore have created the following checklist to help owners recognize where their risk lies and identify strategies that will help their property become more resilient against future water events.

INFRASTRUCTURE BASICS

- » Is the drainage infrastructure in good physical condition?
- » Is the property's drainage system due for replacement or rehabilitation?
- » Do you have a drainage system maintenance plan and is the system routinely maintained?
- » If your system includes pumps, is there a backup pump and backup power source?
- » Does your flood barrier system require human intervention to operate correctly?

RAINFALL RISK

- » Do you have adequate off-property drainage?
- » Do you have adequate drainage across the property?
- » Is the site subject to water from adjacent property?
- » What is the range of rainfall intensity at the property?
- » Is the property drainage system up to current standards?

STORM RUNOFF RISK

- » Is there anything adjacent to the property that contributes to storm runoff?
- » Do the streets redirect water away from the property?
- » Does water collect in the streets?
- » Are the roadways raised with roadside ditches?
- » Do the street curbs and gutters connect to a storm sewer?



STORM WATER DETENTION

- » Does the property's drainage system include storm water detention?
- » How does the flow of storm water to the detention pond affect the property?
- » What is the property elevation in comparison to the high water level of the pond?
- » What is the design basis of the detention pond?
- » How is the property affected if the pond overflows?
- » Is the pond contained within a dam, levee, or similar barrier that would affect the property?

WATERWAY FLOOD RISK

- » Is your property within the 100-year floodplain?
- » Is your property within the 500-year floodplain?
- » Is your property within a mapped floodway?
- » Is your property within proximity of an unmapped stream?
- » Is your property within an interbasin flow zone?
- » What is the elevation of your property in relation to the nearest streams within the floodplain map?

LEVEE-PROTECTED AREA

- » Is your property protected by a levee or dam?
- » Has the structure been certified by an engineer?
- » Is the property in an area that would be impacted by a breach in the dam or levee?
- » What is the current condition of the levee or dam?
- » Who is responsible for the maintenance and upkeep of the dam or levee?
- » What is the maximum capacity of the structure?

GLOSSARY

Infrastructure: Basic physical and organizational structures and facilities (e.g., buildings, roads, and power supplies)

Sheet Flow: Water, usually storm runoff, flowing in a thin layer over the ground surface

Levee: An elongated naturally occurring ridge or artificially constructed fill or wall, which regulates water levels

Dam: Barrier constructed to hold back water and raise its level; typically has water on both sides

Interbasin Flow: Surface water or groundwater flow between two hydrologic basins

Flood Insurance Rate Map (FIRM): The official map of a community on which FEMA has delineated both the special hazard areas and the risk premium zones applicable to the community

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height

100-Year Flood: A flood that statistically has a one-percent chance of occurring in any given year

500-Year Flood: A flood that has a 0.2-percent (or 1 in 500) chance of occurring in a given year

RESOURCES

Houston Flood Control District: www.hcfd.org

City of Houston Emergency Information: www.houstonemergency.org

Federal Emergency Management Agency: www.fema.gov

FEMA Flood Map Service Center: www.fema.gov/flood-mapping-products

Flood Education Mapping Tool (Harris County): www.harriscountyfemt.org

Moore About Water: www.walterpmoore.com/moore-about-water



Charles Penland, PE, LEED AP BD+C
Director of Civil Engineering

713.630.7325

cpenland@walterpmoore.com