

## SAFFIR-SIMPSON SCALE

The Saffir-Simpson Hurricane Scale was developed in the early 1970s by Herbert Saffir, a consulting engineer in Coral Gables, Florida, and Dr. Robert Simpson, the Director of the National Hurricane Center. The scale is based primarily on wind speeds and includes estimates of barometric pressure and storm surge associated with each of the five categories. This scale is used to give an estimate of the potential property damage and flooding expected along the coast from a hurricane landfall.

### Category One Hurricane:

CATEGORY	PRESSURE	WIND SPEEDS	STORM SURGE
1 - Minimal	> 980 mb (28.94")	74-95 mph (64-83 kts)	4-5 ft

No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

### Category Two Hurricane:

CATEGORY	PRESSURE	WIND SPEEDS	STORM SURGE
2 - Moderate	965-979 mb (28.50-28.91")	96-110 mph (65-96 kts)	6-8 ft

Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

### Category Three Hurricane:

CATEGORY	PRESSURE	WIND SPEEDS	STORM SURGE
3 - Extensive	945-964 mb (27.91-28.47")	111-130 mph (97-113 kts)	9-12 ft

Some structural damage to small residences and utility buildings with a minor amount of curtain wall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

### Category Four Hurricane:

CATEGORY	PRESSURE	WIND SPEEDS	STORM SURGE
4 - Extreme	920-944 mb (27.17-27.88")	131-155 mph (114-135 kts)	13-18 ft

More extensive curtain wall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).

### Category Five Hurricane:

CATEGORY	PRESSURE	WIND SPEEDS	STORM SURGE
5 - Catastrophic	< 920 mb (27.17")	> 155 mph or 135 kts	>18 ft

Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.