

Wind Speed Estimates using Observable Conditions

W4HPT Report	Beaufort Number	Wind Speed		Observable Conditions On Land
		mph	Description	
B1	0	<1	Calm	Calm. Smoke rises vertically.
B2	1	1-3	Light air	Wind motion visible in smoke.
	2	3-7	Light breeze	Wind felt on exposed skin. Leaves rustle.
	3	8-12	Gentle breeze	Leaves and smaller twigs in constant motion.
	4	13-17	Moderate breeze	Dust and loose paper blown. Small branches begin to move.
	5	18-24	Fresh breeze	Branches of a moderate size move. Small trees begin to sway.
B3	6	25-30	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
	7	31-38	High wind, Moderate Gale, Near Gale	Whole trees in motion. Effort needed to walk against the wind.
	8	39-46	Fresh Gale	Twigs broken from trees. Cars veer on road.
	9	47-54	Strong Gale	Larger branches break off trees, and some small trees blow over. Construction/temporary signs and barricades blow over. Damage to circus tents and canopies.
B4	10	55-63	Whole Gale/Storm	Trees are broken off or uprooted, saplings become bent and/or deformed, poorly attached asphalt shingles and shingles in poor condition peel off roofs.
	11	64-72	Violent storm	Widespread vegetation damage. Many roof shingles and surfaces sustain damage; gravel may be blown from flat roofs.
B5	12	>73	Hurricane-force Category 1	Considerable and widespread damage to vegetation, a few windows broken, structural damage to mobile homes and poorly constructed sheds and barns. Debris may be hurled about.
B6		> 100	Cat. 2+	Category 2 or Greater Hurricanes [See Saffir-Simpson below]

The chart above provides observable conditions to help estimate wind speeds for making your line B [Bravo] reports when using the W4HPT Hampton Disaster Reporting Form.

Saffir-Simpson Scale		
Storm Category	Wind Speed mph	Storm Surge ft
Tropical Depression	0–38	0
Tropical Storm	39–73	0–3
Hurricane Category 1	74–95	4–5
Hurricane Category 2	96–110	6–8
Hurricane Category 3	111–130	9–12
Hurricane Category 4	131–155	13–18
Hurricane Category 5	≥156	>18

- **Tropical Depression** — winds 0-38 mph (0-33 knots)
See observable conditions listed above.
- **Tropical Storm** — winds 39-73 mph (32-63 knots)
See observable conditions listed above.
- **Category 1 Hurricane** — winds 74-95 mph (64-82 knots)
No real damage to buildings. Damage to unanchored mobile homes. Some damage to poorly constructed signs. Also, some coastal flooding and minor pier damage.
- **Category 2 Hurricane** — winds 96-110 mph (83-95 knots)
Some damage to building roofs, doors and windows. Considerable damage to mobile homes. Flooding damages piers and small craft in unprotected moorings may break their moorings. Some trees blown down.
- **Category 3 Hurricane** — winds 111-130 mph (96-113 knots)
Some structural damage to small residences and utility buildings. Large trees blown down. Mobile homes and poorly built signs destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain may be flooded well inland.
- **Category 4 Hurricane** — winds 131-155 mph (114-135 knots)
More extensive curtain wall failures with some complete roof structure failure on small residences. Major erosion of beach areas. Terrain may be flooded well inland.
- **Category 5 Hurricane** — winds 156 mph and up (135+ knots)
Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Flooding causes major damage to lower floors of all structures near the shoreline. Massive evacuation of residential areas may be required.