

CAT Hotsheet



Institute for
Catastrophic Loss Reduction

Hurricane Juan

Date: September 28 & 29, 2003
Time: 12:10 a.m. ADT (landfall)
Location: Nova Scotia (Shad Bay to Prospect) and Prince Edward Island
Insured loss: CAD132.67 million (2003 dollars)
Economic loss: USD180 million (estimated ¹)
Return period: 1 in 100 year

Just after midnight, September 28, 2003, Hurricane Juan rolled ashore in Nova Scotia between Shad Bay and Prospect, as a Category 2 storm. The 10th named storm and sixth hurricane of the 2003 Atlantic hurricane season lashed the Halifax-area with 160 km/h winds and gusts of up to a reported 230 km/h. The storm rapidly moved northward, quickly falling to a Category 1 on the Saffir-Simpson scale. After bisecting Nova Scotia and entering Prince Edward Island as a tropical storm, it became extratropical over Labrador and rapidly dissipated.

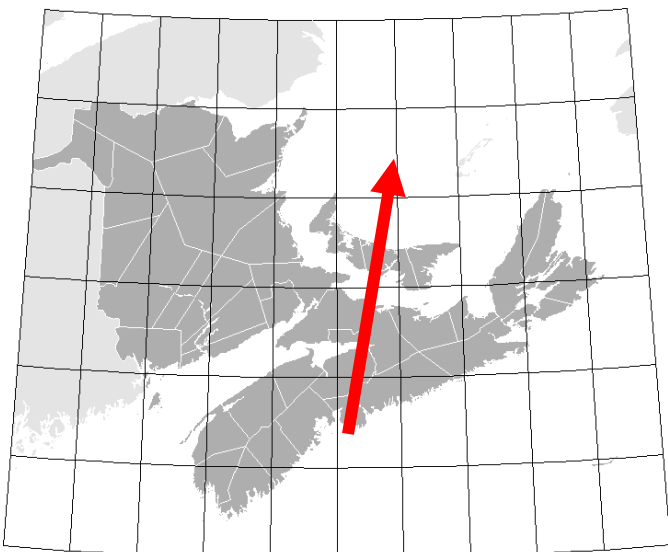
Juan caused widespread damage in central Nova Scotia and Prince Edward Island, with most of the severe property damage being concentrated in the western portion of Halifax. The town of Truro, N.S. and Charlottetown, P.E.I., also experienced significant property damage. Millions of trees were lost due to the storm, including an estimated 400,000 in Halifax alone. Roughly 70 per cent of the trees in Halifax's Point Pleasant Park were destroyed.

It was reported that weather buoys off the entrance of Halifax Harbour snapped their moorings after reportedly recording waves in excess of 20 metres (65 feet). Excessive damage was reported to pleasure craft, marinas, docks, seawalls and breakwaters. Severe erosion was also reported in several areas.

More than 300,000 people were left without power in both Nova Scotia and Prince Edward Island. It took up to a week and a half to restore power to the hardest hit rural areas of Nova Scotia's Eastern Shore and the Musquodoboit River valley.

Juan claimed two lives directly and six indirectly in Nova Scotia and Quebec, although those reported lost in Quebec were reported to have been fishermen from New Brunswick operating near Anticosti Island in the Gulf of St. Lawrence.

Hurricane Juan landfall and inland route



Saffir-Simpson Hurricane Scale

Category	Winds	Effects
One	74-95 mph (119-153 km/h)	No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Also, some coastal road flooding and minor pier damage
Two	96-110 mph (154-177 km/h)	Some roofing material, door, and window damage to buildings. Considerable damage to vegetation, mobile homes, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of center. Small craft in unprotected anchorages break moorings.
Three	111-130 mph (178-209 km/h)	Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Mobile homes are destroyed. Flooding near the coast destroys smaller structures with larger structures damaged by floating debris. Terrain continuously lower than 5 feet ASL may be flooded inland 8 miles or more.
Four	131-155 mph (210-249 km/h)	More extensive curtainwall failures with some complete roof structure failure on small residences. Major erosion of beach. Major damage to lower floors of structures near the shore. Terrain continuously lower than 10 feet ASL may be flooded requiring massive evacuation of residential areas inland as far as 6 miles.
Five	greater than 155 mph (249 km/h)	Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. Major damage to lower floors of all structures located less than 15 feet ASL and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5 to 10 miles of the shoreline may be required.

Established in 1998 by Canada's property and casualty insurers, ICLR is an independent, not-for-profit research institute based in Toronto and at the University of Western Ontario in London, Canada. ICLR is a centre of excellence for disaster loss prevention research and education. ICLR's research staff is internationally recognized for pioneering work in a number of fields including wind and seismic engineering, atmospheric sciences, water resources engineering and economics. Multi-disciplined research is a foundation for ICLR's work to build communities more resilient to disasters.

ⁱ Topics: Annual review of North American natural catastrophes 2003; American Re)