



## **Winter Flood Risks: Flood insurance brings peace of mind in moments that matter.**

**Get your flood insurance policy today!**

Storms, snow, ice accumulation, bitter cold temperatures...severe winter weather often produces prime conditions that can lead to winter flooding. The entire US has potential for winter flooding—even places where it is historically not an issue. Read more about winter and spring weather conditions that are capable of unleashing flood-producing moisture.

## Atmospheric River (AR)

This is a flowing, river-like vapor of condensed water from the tropics. When an AR makes landfall, the water vapor is released in the form of rain or snow and can cause extreme rainfall and floods. A well-known example is the **Pineapple Express**—a strong AR originating near Hawaii to the west coast of the US.

### Atmospheric River Facts

- ARs average 250 to 375 miles wide.
- 30% to 50% of average annual precipitation on the West Coast happens in just a few AR events.
- ARs are present somewhere on Earth at any given time.

Source: noaa.gov

## Bombogenesis

This is a fierce and fast-growing storm resulting from warm air colliding with cold air, which is why it often associated with winter. It becomes a bombogenesis because the atmospheric pressure drops rapidly as the two air systems create a vacuum.

The word is derived from a combination of bomb and cyclogenesis. A cyclone occurs in the Northern Hemisphere and is a column of rising air that spins counter-clockwise to create lowered atmospheric pressure.

### Locations for Bombogenesis

The North Atlantic region is often the recipient of bombogenesis events, but they occur over much of the US.

### Bombogenesis Facts

- A bombogenesis often produces intense wind, blizzards and rain on top of snow that can create river flooding.
- **Nor'easters** are storms that occur along the East Coast of North America where Artic winds from the northeast meet warmer air carried up via the Gulf Stream. A nor'easter may also turn into a bombogenesis when the pressure sinks quickly. The moisture from the ocean feeds the storm that can cause massive flooding. One of the most notorious nor'easters was the 2011 Halloween Nor'Easter, impacting the Mid-Atlantic and Northeastern US with over 30 inches of snow reported in western Massachusetts and southern New Hampshire, causing multi-billions of dollars in damage.
- The 2011 Halloween Nor'easter is proof that winter flood risks are not just in winter.

Source: noaa.gov

Contact your insurance agent to purchase flood insurance today and get peace of mind knowing you have the protection you need.

Torrent Technologies is a business of Marsh, which is one of the Marsh & McLennan Companies, together with Guy Carpenter, Mercer, and Oliver Wyman.

This document and any recommendations, analysis, or advice it contains (the "Analysis") are not intended to advise you regarding any individual situation and should not be relied upon for that purpose. Torrent's Analysis is based on sources we believe reliable, but we make no representation or warranty as to its accuracy. Torrent has no obligation to update this Analysis and shall have no liability to you or any other party arising out of this publication or its contents.

Copyright © 2020. Torrent Technologies, Inc. All rights reserved. | USDG 438320745