

**ATTACHMENT 2 B
NOR'EASTERS AND
WINTER STORMS**

 Advertisement

Nor'easter History

[Home](#)

[Up](#)

[Hurricane vs.](#)

[Nor'easter History](#)

[Fire Island](#)
[Ocean Beach](#)
[Calendar-Events](#)
[Ferry Schedule](#)
[Restaurants](#)
[Classifieds](#)
[Activities](#)
[Directions](#)
[Pictures](#)
[Polls](#)
[Links](#)
[Weather](#)
[Partners](#)
[Home](#)

All Nor'easter are born in and get their energy from the Jet Stream. Over the last few decades the pattern of the Jet Stream has become curvier, making at times more pronounced curves, going further south, therefore, because of the greater temperature differences, creating the potential for more powerful storms. Sometimes remnants of hurricanes and their warm moist air, feed a Nor'easter. This happened with the Oct. 18-21, 1996 storm (fed by Lili) and the Halloween Storm of 1991 (fed by Grace).

Blizzard of 1996

This Jan. 6-8 storm hit the residents of the heavily populated North-east Corridor (Washington, DC to Boston). 20 to 30 inch snowfalls whipped up into huge snowdrifts by the cold winds caused widespread power outages. This storm caused 154 deaths and \$ 1 billion damages.

Damages on Fire Island were limited to a few houses (Sorry, my records are not complete here)

The Super Storm of March 13, 1993

Weather forecasters called this one: The storm of the Century. Half of the U.S. population (26 States) was affected. In the U.S. 270 people were killed. Over 160 people were rescued by the Coast Guard in the Gulf of Mexico and Atlantic. In Canadian Waters a 600 ft cargo ship went down. Property damage amounted to \$ 2 billion. Every highway and airport was closed north of Atlanta. Florida was hit by a 12-ft storm surge and on it's path north-east it damaged uncounted beaches, homes and marinas. Right after the storm it turned exceptionally warm. The snow melted rapidly and the floodwaters damaged many more properties.

Damage on Fire Island was extensive. The New York Times in it's December 15 edition reported: 12,000 Homes Said to Sustain Storm Damages and showed damaged houses on Fire Island. The storms were so powerful, they scoured from 70 to 100 ft of beach away, almost the entire length of the island. Dunes were reduced to 0 to 8ft in most places from their previous 15 to 25 feet.



These two winter storms took the following toll:

| | Out to Sea | Damaged | Uninhabitable |
|-------------|------------|---------|---------------|
| Kismet | 3 | 2 | 2 |
| Saltaire | 2 | 16 | 0 |
| Fair Harbor | 8 | 8 | 13 |
| Dunewood | 3 | 7 | 0 |
| Lonelyville | 0 | 2 | 0 |

The Great Nor'easter of December 11, 1992

The National Weather Service called this storm "one of the epic storms of all time". Insured losses mounted to \$ 850 million Total damages around \$ 2 billion) and nine deaths. High storm surges caused many mandatory evacuations in coastal areas. The FDR was inundated and rescue divers had to rescue trapped motorists. The Red Cross sheltered 300,000 people. This was the storm that wiped out the stretch of homes in Westhampton and caused breaches into Moriches Bay.

On Fire Island: For four days the beach was pummeled by high waves, which were made more damaging due to the high tides.

Joseph Fayden (homeowner) writes: The 92 storm arrived on a full moon and the tide was about 7 feet above norm. It also lasted 3 full flood tides.

The Halloween Storm of 1991

This was a meteorological abnormality in that this nor'easter met up with the remnants of a hurricane and the storm retrograded, or began to move backward to the south and west. This storm then meandered in circle several hundred miles offshore. It continued to hurl huge waves at the shores from Puerto Rico to Maine. Winds topped 100 miles over the Ocean. Nearly 750,000 sq. miles of ocean experienced gale force winds or more. Average wave height as registered by buoys was 50ft. with rogue waves up to 100 feet. Insured damage was listed at \$ 168 million. President George Bush's summer home in Kennebunkport was damaged too.

On Fire Island: I have no information on Fire Island currently. But it wasn't pretty!

The February 1978 Nor'easter

Joseph Fayden (homeowner) writes: The 2 worst storms I ever saw was the Feb 1978 nor'easter and the December 11, 1992 nor'easter.

One had rain the other had snow.

The Ash Wednesday Storm of March 7, 1962

This is another major storm of recent memory. It caused \$300,000 in damages and spread over the entire East Coast.

On Fire Island: About 100 homes were lost.

Blizzard of 1888

This Nor'easter killed 400 people, 200 in New York City alone, Snowfall averaged 40-50 inches and reached from Chesapeake Bay to the North Atlantic. 200 boats were grounded or destroyed and 100 sailors died.

[Back](#) [Home](#) [Up](#)

Revised: 07/09/2002

Copyright © 1998-2003 Ocean-Beach.com
All rights reserved.

E-mail Webmaster@Oce
with comments at

[Terms & Conditions](#)

[Search this Site](#)

CENTRAL PARK - 1869 to Present

Biggest Snow Storms

26.4" December 26th-27th, 1947
21.0" March 12th-14th, 1888
20.2" January 7th-8th, 1996
19.8" February 16th-17th, 2003
18.1" March 7th-8th, 1941
18.0" December 26th, 1872
17.7" February 5th-7th, 1978
17.6" February 11th-12th, 1983
17.5" February 4th-7th, 1920
17.4" February 3rd-4th, 1961
16.0" December 19-20th, 1948
16.0" February 12th-13th, 1899

Blizzard of 1996

Dumping more than 20 inches of snow in Central Park, the blizzard of Jan. 7-8, 1996, marked the second biggest snowstorm in New York City history. With winds gusting to more than 50 miles an hour, the powerful nor'easter caused widespread power outages, scores of fatalities and \$1 billion in damages from Washington, D.C. to Boston.

Thousands of travelers were stranded at City airports, bus terminals and highway rest stops as transportation ground to a halt. On Jan. 8, New York City public and parochial schools were ordered closed, several Broadway shows canceled performances, and the New York Stock Exchange had a short day.

Dozens of deaths were attributed to the storm, including a Connecticut man and two New Jersey men who suffered heart attacks while shoveling snow.

As 26,528 tons of salt was spread on City roads, snow was hauled to designated vacant lots and parking areas or dumped into the East and Hudson Rivers. By the end of the 1995-1996 winter season, New York City had experienced 16 snowstorms and recorded more than 89 inches of snow.

New Haven County, CT; 73 mph in Ocean County, NJ; 61 mph in Gloucester County, NJ; 62 mph in Montgomery County, PA; 61 mph in Suffolk County, NY; 72 mph in Worcester County, MA; and 69 mph in Nantucket County, MA.

Four children were killed and 6 people injured when high winds toppled a tree onto a school van in Queens County, NY. Problems due to high winds, including downed trees, power outages, and damage to homes, were reported in Franklin, Barnstable, Worcester, Bristol, Norfolk, Suffolk, Nantucket, Bristol, Dukes, Middlesex, Plymouth, and Essex Counties, MA; Providence and Kent Counties, RI; Hartford, Windham, New Haven, and Fairfield Counties, CT; Cheshire and Hillsborough Counties, NH; Suffolk, Nassau, Queens, Orange, and Putnam Counties, NY; Union, Bergen, Essex, Hudson, Sussex, Morris, Mercer, Burlington, Monmouth, Ocean, Gloucester, Atlantic, Cumberland, Salem, and Cape May Counties, NJ; Bedford, Westmoreland, Berks, Lehigh, Montgomery, Philadelphia, and Dauphin Counties, PA; and New Castle and Kent Counties, DE.

Wintry Mix

A low pressure system brought snow, freezing rain, sleet, and rain to the Northeast on the 14th. Snow totals across New York and northern New England were between 1 and 6 inches. Central Pennsylvania saw some ice accumulation from freezing rain, which resulted in trees downed in McKean and Cambria Counties, PA. Buffalo, NY set a daily precipitation record, while Warren County, PA saw some water covered roads in low lying areas.

Thunderstorms across Mid-Atlantic

Thunderstorms in advance of a strong cold front dropped hail and produced high winds in areas of the Mid-Atlantic on the 29th. Nickel-size hail fell in Berkeley County, WV. One inch diameter hail fell across Chester County, PA, and Sussex County, DE, while 0.75 to 1.75 inch diameter hail was reported in Gloucester County, NJ. There were numerous reports of small hail across the Piedmont of Maryland and northern Virginia, and across central and southern New Jersey and Delaware.

Two farm buildings were destroyed by high winds in Queen Anne's County, MD, while a large barn was destroyed and a chicken shed lifted off its foundation in Caroline County, MD. In Sussex County, NJ, thunderstorm winds damaged several mobile homes, downed trees, overturned gas tanks, and damaged an above-ground pool.

April Fools Nor'easter - March 31 to April 1

An intensifying storm off the Mid-Atlantic coast on the 31st deepened even further on April 1st, bringing record-setting snows to portions of the Northeast. Snowfall amounts of 12 inches and higher blanketed northeast Pennsylvania, northwestern New Jersey, eastern New York, and central New England, while 24 inches and higher covered the northern Catskill Mountain region of New York and central and eastern Massachusetts. Worcester, MA experienced its greatest snowstorm ever, as 33 inches fell over the two days. Boston, MA recorded 25.4 inches, making for its third greatest snowstorm ever. Storm totals in other areas reached 37 inches in East Jewett, NY; 36 inches in Milford, MA; 30.5 inches in Burrillville, RI; and 26 inches in High Point, NJ. (See Figure 3 on page 5.) High winds also accompanied the storm, with the some of the higher peak gusts recorded at Blue Hill Observatory in Milton, MA (72 mph); Boston, MA (53 mph); Providence, RI (51 mph); and Little Compton, RI (71 mph). Peak winds between 30 and 50 mph were reported across much of the Northeast.

Boston's Logan International Airport was closed, as were many schools across New England, and a state of

Event Record Details

| | |
|---|----------------------------------|
| Event: Heavy Snow | State: New York |
| Begin Date: 17 Feb 2003, 01:00:00 AM EST | Map of Counties |
| Begin Location: Not Known | Forecast Bronx, Kings |
| End Date: 18 Feb 2003, 02:00:00 AM EST | Zones (brooklyn), Nassau, |
| End Location: Not Known | affected: New York |
| Magnitude: 0 | (manhattan), |
| Fatalities: 0 | Northeast Suffolk, |
| Injuries: 0 | Northern |
| Property \$ 20.0M | Westchester, |
| Damage: | Northwest Suffolk, |
| Crop Damage: \$ 0.0 | Orange, Putnam, |
| | Queens, Richmond |
| | (staten Is.), Rockland, |
| | Southeast Suffolk, |
| | Southern |
| | Westchester, |
| | Southwest Suffolk |

Description:

With an exceptionally strong high pressure system over New England, a low pressure system developed off the Mid Atlantic Coast. Periods of light snow developed as northeast winds increased to around 15 mph across the NYC Metro area Sunday afternoon, February 16th. Snow became widespread and heavy, falling at rates up to 2 to 3 inches per hour Sunday night and Monday, February 17th. Heavy snow blown by northeast winds 20 to 30 mph caused near blizzard conditions throughout the area. Record heavy snowfalls crippled mass transit. These extremely hazardous weather conditions led to local emergency declarations throughout the region. In New York City, the cost estimate for total snowfall operations was around 20 million dollars. In addition, widespread moderate beach erosion and minor tidal flooding accompanied this system. Storm Total Snowfall ranged from around 14 to 28 inches. Here are selected specific snowfall amounts for: Orange County: from 14.0 inches at Port Jervis to 28.0 inches at Tuxedo. Putnam County: from 15.5 inches at West Mahopac to 20.0 inches at Carmel. Rockland County: from 18.0 inches at Nyack to 24.3 inches at Sparkill. Westchester County: from 14.5 inches at Croton On Hudson to 26.0 inches at Thornwood. New York City: from 15.5 inches at Marine Park in Brooklyn to 25.6 inches at JFK Airport. At the Central Park Zoo, 19.8 inches was measured. At LaGuardia Airport, 16.5 inches was measured. Nassau County: from 14.1 inches at Valley Stream to 23.5 inches at Farmingdale. Suffolk County: from 14.0 inches at Islip and Manorville to 24.0 inches at Bohemia and Bridgehampton. At the National Weather Service Office in Upton, 21.1 inches was measured.