

APPENDIX E. RISK ASSESSMENT SUPPLEMENT

This appendix contains information and details to support information provided Section 5 (Risk Assessment).

E.1 Coastal Erosion

Coastal erosion events from 1897 to 2013 are listed in the table below.

Table E-1. Coastal Erosion Events, 1897-2013

Event Date / Name	Location	Losses / Impacts
Nor'easter	SC	Separated Orient Village from the North Fork
October 24, 1897		
October 29, 1693	L.I.	Fire Island Cut broken through
"The Great Storm of 1693"		
September. 23, 1815	L.I. (Center	Many structures damaged including Montauk Lighthouse
"The Great September Gale"	Moriches)	
Nor'easter	SC	Created Moriches Inlet, severe beach erosion and structural damage
March 4, 1931		
G . 1 21 1020	7.7	Δ ' . 1 ΦC 2 M
September 21, 1938	L.I.	Approximately \$6.2 M, multiple deaths, Shinnecock Inlet created,
"Long Island Express" or		Moriches Inlet widened
"Great Hurricane of '38"	C	Damana & \$000 K 2 Carat Const Cotton & 1 Name Date 1
September 14, 1944	South-eastern	Damage > \$800 K, 2 Coast Guard Cutters & 1 Navy Destroyer sunk in
"Great Atlantic Hurricane"	NYS	or near SC; Bluffs along the north shore eroded at their base; \$733,000
		in shoreline damage to the North shore and Peconic shorelines;
A + 21 1054	T T	Approximately \$100,000 damages to Westhampton Beach Approximately \$3 M in damages (Nassau and Suffolk Counties)
August 31, 1954 Hurricane Carol (FEMA DR-26)	L.I.	Approximately \$5 M in damages (Nassau and Sulloik Counties)
Humcane Carol (FEMA DR-20)		
August 7-19, 1955	Southeastern	Millions - but not quantified
Hurricane Diane (FEMA DR-45)	NYS	rimons out not quantities
September 12, 1960	L.I.	Approximately \$1.9 M in damages in areas from Jones Inlet to Montauk
Hurricane Donna		Point
Nor'easter / Flooding	Southeastern	Resulted in total damages of \$130 M in damages and 40 deaths, \$714 K
March 6-8 1962	NYS,	in disaster aid throughout SC, Millions in damages to Fire Island
(FEMA DR-129)	throughout	
"Ash Wednesday Storm" or	L.Ĭ.	
"Great Atlantic Storm of 1962"		
August 10, 1976	SC	Approximately \$2.5 M
Hurricane Belle (FEMA DR-520)		
Nor'easter	SC (North	NA
February 6-7, 1978	Shore -	
(one of largest)	Peconic Bay)	
1982	L.I.	1 of top 3 erosion events
Hurricane Cindy		
October 27, 1985	ŢŢ	Approximately \$49.5 M in demages, wind demage, beach arrains
Hurricane Gloria (FEMA DR-	L.I.	Approximately \$48.5 M in damages, wind damage, beach erosion
*		
750) August 17-19, 1991	L.I.	Approximately \$11.8 M in damages, spawned 2 tornadoes on L.I.
Hurricane Bob (FEMA DR-918)	L.I.	Approximately \$11.6 W iii damages, spawned 2 tornadoes on L.I.
Nor'easter	Northeastern	\$2.6 B in total damages, 9 deaths
October 30-31, 1991		φ2.0 B in total damages, 9 deaths
"The Perfect Storm" or	U.S.	
"Halloween Storm of 1991"		
Talloween Morth of 1991	I	1



Event Date / Name	Location	Losses / Impacts
(1 of top 3 erosion events)		
Nor'easter December 11-13, 1992 (FEMA DR - 974)	Southeastern NYS	Approx. \$31.2 M in damages, severe beach erosion on South Shores, destruction in North Fork, new inlets, 100 + structures damaged
Nor'easter / Blizzard March 12-14, 1993 (FEMA EM-3107) "Superstorm of 1993" or "Storm of the Century" Also identified as a Winter Storm	Statewide	Approx. \$8.5 M in total damages
August 14, 1995 Hurricane Felix	Southeastern NYS	Beach erosion, two houses washed away in East Hampton
Nor'easter October 19-20, 1996 (FEMA DR-1146)	Northeastern U.S., Suffolk and Westchester Counties	Approx. 16.1 M in total damages (NYS HMP) - Approx. \$3.5 M in disaster aid to the two counties, \$286 K in additional federal aid to SC
September 16. 1999 Tropical Storm Floyd (FEMA DR-1296)	Eastern NYS (including SC)	Approximately \$62.2 M in damages to 12 counties in eastern NYS; Approximately \$169 K in disaster aid to Huntington, Asharoken and Patchogue, SC. Power outages and beach erosion
Nor'easter September 30, 2001	Multi-State (Twin Forks – Sag Harbor /Montauk)	35 feet of dunes were lost
Nor'easter December 2003	L.I.	Moderate to severe erosion on some South Shore beaches
October 14, 2005 (Flooding - Remnants of Hurricane Wilma)	SC	Approx. \$43 M in damages (\$23 M in residential damage, \$6.5 M in agricultural loss and \$14 M in municipal damage)
September 2, 2006 Tropical Storm Ernesto	L.I. (Hempstead and Babylon)	Beach Erosion, Power Outages
Nor'easter April 14-16, 2007 (FEMA-DR-1692)	Multi-State	Major flooding and coastal erosion throughout County (Approximately \$26 M in damage)
High Surf November 4, 2009	SC	A strong and persistent east northeast wind gradient existed over the region between strong low pressure and a strong high pressure system. The tidal piling over several tidal cycles caused widespread moderate coastal flooding along the south shore back bays of Queens, Brooklyn and Long Island and the eastern bays of Long Island. High seas and long period easterly swells also caused significant beach erosion along Atlantic Ocean facing beaches. Severe beach erosion and cuts into the dunes occurred along the Atlantic Ocean facing beaches. Also an estimated 200,000 cubic yards of sand was lost along a 10,000 ft. stretch of beaches.
Coastal Flood March 13, 2010	SC	The combination of strong high pressure and intensifying low pressure created a prolonged period of strong east winds across the region The highest winds and resultant tidal rises occurred with widespread moderate coastal flooding occurring. Positive tidal departures of 3 to 5 feet were recorded, with many places seeing water levels reaching their highest levels in almost 20 years. In addition, the prolonged east winds generated high surf that battered the Atlantic facing shoreline for several days, which caused severe beach erosion. The Hamptons suffered the worst beach erosion in 20 years according to Suffolk County officials as waves up to 20 ft battered the shoreline. The Hamptons are estimated to have suffered at least 30 million dollars in property damage.



Event Date / Name	Location	Losses / Impacts
Hurricane September 2, 2010	SC	Hurricane Earl produced battering surf, beach erosion, dangerous rip currents and localized washovers along Atlantic Ocean facing beaches as it passed about 90 miles southeast of Nantucket on September 4th. There were numerous reports of washovers with beaches flooded as water surged up to the dunes. Many beach roads were flooded in the areas of the Hamptons with Dune Road closed between Shinnecock Inlet and Quogue Village. In addition, dangerous rip currents were reported at ocean beaches Thursday into the weekend.
Severe Winter Storm December 26, 2010	SC	This intense low pressure system spread snowfall into the region, The blizzard resulted in severe beach erosion and minor to moderate coastal flooding for much of the North Shore of Suffolk County and the Twin Forks of Long Island. Because of the slow movement of the intense storm, seas were able to build and funnel into the coastline on a long northeast fetch. The high wind speeds were of moderate duration and resulted in very significant beach erosion, particularly during times of high tide. Five to 7 foot wind waves on top of a 2 to 3 foot surge was likely responsible for the severe beach erosion. The additive effects of wave action on top of surge likely compounded the erosion. The combined effect of surge and waves had major impact on the immediate shoreline in terms of beach erosion, washovers, and waterfront damage.
Hurricane August 28, 2011	SC	Irene moved across Southeastern New York and Western Connecticut. The large envelope of winds associated with Tropical Storm Irene pushed a 3 to 5 foot surge of water along Western Long Island Sound, New York Harbor, the southern and eastern bays of Long Island and southern bays of New York City. This resulted in moderate to major coastal flooding, wave damage and erosion along the coast, with heavy damage to public beaches and other public and private facilities. The USGS tidal gauge in West Pond at Glen Cove recorded a maximum water level of 9.26 ft. These water levels caused widespread moderate to major coastal flooding.
Superstorm Sandy October 29, 2012	SC	As Sandy continued to move northwest and interact with the mid latitude trough, its interaction continued to make it less tropical, but did not weaken it much. Record breaking high tides and wave action was combined with sustained winds of 40 to 60 mph and wind gusts of 80 to 90 mph. These extreme conditions resulted in at least 60 deaths and widespread property damage of at least 42 billion dollars. Emergency managers recommended mandatory evacuations of more than 1/2 million people that lived in low lying areas.
Nor'Easter December 26-28, 2012	SC	The storm brought strong winds and some coastal flooding. \$2,000 in property damages from the high winds (gusts up to 68 mph on Plum Island in the town of Southold) was recorded.

Sources:

Suffolk County HMP 2007, Suffolk County HMP 2013

E.2 Drought

Drought events from 2002-2013 are documented in the table below.

Table E-2. Drought Events, 2002-2013

Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	1/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST,	SUFFOLK	NY	4/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K





Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHWEST, NORTHWEST SUFFOLK											
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	5/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	6/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	7/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	8/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	9/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
SOUTHEAST, NORTHEAST, SOUTHWEST, NORTHWEST SUFFOLK	SUFFOLK	NY	10/1/2002	0:00	EST	Drought		0	0	0.00K	0.00K
Totals:								0	0	0.00K	0.00K

E.3 Earthquake

Earthquake events in Suffolk County from 2008-2013 are documented in the table below.

Table E-3. Earthquake Events, 2008-2013

Dates of Event	Event Type	Location	FEMA Declaration Number	County Designated?	Losses / Impacts
February 27, 2008	Earthquake 2.7	Howes Cave, NY	N/A	N/A	No reference and/or no damage reported.
May 28, 2008	Earthquake 1.8	Saratoga Springs, NY	N/A	N/A	No reference and/or no damage reported.
February 18, 2009	Earthquake 2.3 – 2.7	East Berne, NY	N/A	N/A	No reference and/or no damage reported.
February 20, 2009	Earthquake 2.7	East Berne, NY	N/A	N/A	No reference and/or no damage reported.
February 23, 2009	Earthquake 2.1	East Berne, NY	N/A	N/A	No reference and/or no damage reported.
March 22, 2009	Earthquake 2.1 - 2.8	Berne, NY	N/A	N/A	No reference and/or no damage reported.
May 18, 2009	Earthquake 2.1 - 3.0	Berne, NY	N/A	N/A	No reference and/or no damage reported.





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Dates of Event	Event Type	Location	FEMA Declaration Number	County Designated?	Losses / Impacts
October 21, 2009	Earthquake 2.9	East Berne, NY	N/A	N/A	No reference and/or no damage reported.
December 13, 2009	Earthquake 2.6 – 3.1	Berne, NY	N/A	N/A	No reference and/or no damage reported.
February 15, 2010	Earthquake 2.2	Berne, NY	N/A	N/A	No reference and/or no damage reported.
February 18, 2010	Earthquake 2.7	Berne, NY	N/A	N/A	No reference and/or no damage reported.
March 24, 2010	Earthquake 2.7	Berne, NY	N/A	N/A	No reference and/or no damage reported.
June 23, 2010	Earthquake 5.5	Ontario and Quebec, Canada border	N/A	N/A	A minor earthquake in Canada was felt throughout the New York City and upstate New York area. The earthquake lasted about 30 seconds. Tremors were felt in the City of Binghamton.
August 23, 2011	Earthquake 5.9	Virginia	N/A	N/A	An earthquake centered in Virigina was felt up and down the east coast. Many residents across Long Island, including in Suffolk County, said they felt the earthquake.
August 25, 2011	Earthquake 2.0 – 2.8	Altamont, NY	N/A	N/A	No reference and/or no damage reported.
August 26, 2011	Earthquake 2.2	Altamont, NY	N/A	N/A	No reference and/or no damage reported.
August 27, 2011	Earthquake 2.9	Altamont, NY	N/A	N/A	No reference and/or no damage reported.
November 21, 2011	Earthquake 2.4	Moira, NY	N/A	N/A	No reference and/or no damage reported.
January 7, 2012	Earthquake 2.1	Bombay, NY	N/A	N/A	No reference and/or no damage reported.
January 23, 2012	Earthquake 2.3	Johnsburg, NY	N/A	N/A	No reference and/or no damage reported.
March 23, 2012	Earthquake 2.5	Mt. Morris, NY	N/A	N/A	No reference and/or no damage reported.
September 7, 2012	Earthquake 2.1	Greenwich, CT	N/A	N/A	No reference and/or no damage reported.
October 26, 2012	Earthquake 2.5	Newfane, NY	N/A	N/A	No reference and/or no damage reported.
November 5, 2012	Earthquake 2.1	Ringwood, NJ	N/A	N/A	No reference and/or no damage reported.
January 16, 2013	Earthquake 2.4	Malone, NY	N/A	N/A	No reference and/or no damage reported.
February 16, 2013	Earthquake 1.8	Broadalbin, NY	N/A	N/A	No reference and/or no damage reported.



Dates of Event	Event Type	Location	FEMA Declaration Number	County Designated?	Losses / Impacts
February 26, 2013	Earthquake 2.0	Malone, NY	N/A	N/A	No reference and/or no damage reported.
March 7, 2013	Earthquake 2.2	Altamont, NY	N/A	N/A	No reference and/or no damage reported.
March 13, 2013	Earthquake 2.3	Newcomb, NY	N/A	N/A	No reference and/or no damage reported.
March 17, 2013	Earthquake 1.6	Newcomb, NY	N/A	N/A	No reference and/or no damage reported.
April 1, 2013	Earthquake 1.7	Brownville, NY	N/A	N/A	No reference and/or no damage reported.
April 4, 2013	Earthquake 1.8	Hope Valley, RI	N/A	N/A	No reference and/or no damage reported.
April 18, 2013	Earthquake 2.1	Kinnelon, NJ	N/A	N/A	No reference and/or no damage reported.
April 20, 2013	Earthquake 1.9	Medina, NY	N/A	N/A	No reference and/or no damage reported.
May 1, 2013	Earthquake 1.2	Norwood, NY	N/A	N/A	No reference and/or no damage reported.
May 2, 2013	Earthquake 1.5	Newcomb, NY	N/A	N/A	No reference and/or no damage reported.
May 16, 2013	Earthquake 1.4	Attica, NY	N/A	N/A	No reference and/or no damage reported.
June 23, 2013	Earthquake 2.1	Rockaway, NJ	N/A	N/A	No reference and/or no damage reported.
July 20, 2013	Earthquake 1.4	Massena, NY	N/A	N/A	No reference and/or no damage reported.
July 27, 2013	Earthquake 2.0	Utica, NY	N/A	N/A	No reference and/or no damage reported.
August 25, 2013	Earthquake 2.7	Hadley, NY	N/A	N/A	No reference and/or no damage reported.
August 27, 2013	Earthquake 2.0	Malone, NY	N/A	N/A	No reference and/or no damage reported.
September 9, 2013	Earthquake 2.0	Dundee, NY	N/A	N/A	No reference and/or no damage reported.

Source: Suffolk County HMP 2013

E.4 Expansive Soils

In Suffolk County, only one reported occurrence was reported in Smithtown. On January 15, 2013, a water main broke creating a giant gaping sink hole that damaged a vehicle. There were no injuries reported and only 26 residences were without water for a few hours (NYS DHSES 2013).





E.5 Flood

Flood events from 1996 to 2013 are listed in the table below.

Table E-4. Flood Events, 1996-2013

				,							
Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
Totals:								0	0	11.000M	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	1/12/1996	18:00	EST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	1/19/1996	12:00	EST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	4/16/1996	4:00	EST	Flood		0	0	0.00K	0.00K
WESTERN SUFFOLK CTY	SUFFOLK CO.	NY	6/3/1996	6:30	EST	Flood		0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	7/31/1996	11:25	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	7/31/1996	14:00	EST	Flash Flood		0	0	0.00K	0.00K
LINDENHURST	SUFFOLK CO.	NY	10/19/1996	12:55	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	10/19/1996	13:00	EST	Flash Flood		0	0	0.00K	0.00K
MIDDLE IS	SUFFOLK CO.	NY	10/19/1996	18:30	EST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	1/23/1998	18:30	EST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	3/8/1998	22:00	EST	Flood		0	0	0.00K	0.00K
SOUTHWEST PORTION	SUFFOLK CO.	NY	6/12/1998	22:49	EST	Flash Flood		0	0	0.00K	0.00K
WEST PORTION	SUFFOLK CO.	NY	6/13/1998	13:18	EST	Flash Flood		0	0	0.00K	0.00K
EAST PORTION	SUFFOLK CO.	NY	6/13/1998	14:52	EST	Flash Flood		0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	6/26/1998	15:30	EST	Flash Flood		0	0	0.00K	0.00K
EAST QUOGUE	SUFFOLK CO.	NY	8/18/1998	16:00	EST	Flood		0	0	0.00K	0.00K
WEST CENTRAL PORTION	SUFFOLK CO.	NY	1/3/1999	12:10	EST	Flash Flood		0	0	0.00K	0.00K
LINDENHURST	SUFFOLK CO.	NY	1/15/1999	8:55	EST	Flash Flood		0	0	0.00K	0.00K
CENTRAL PORTION	SUFFOLK CO.	NY	7/22/1999	14:00	EST	Flood		0	0	0.00K	0.00K
DEER PARK	SUFFOLK CO.	NY	8/11/1999	8:52	EST	Flash Flood		0	0	0.00K	0.00K
WEST PORTION	SUFFOLK CO.	NY	8/26/1999	12:00	EST	Flash Flood		0	0	0.00K	0.00K
WEST GILGO BEACH	SUFFOLK CO.	NY	9/8/1999	7:15	EST	Flash Flood		0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
WESTHAMPTON	SUFFOLK CO.	NY	9/10/1999	15:00	EST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	9/16/1999	12:45	EST	Flash Flood		0	0	0.00K	0.00K
LINDENHURST	SUFFOLK CO.	NY	4/21/2000	16:55	EST	Flash Flood		0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	4/21/2000	19:00	EST	Flash Flood		0	0	0.00K	0.00K
WEST CENTRAL PORTION	SUFFOLK CO.	NY	4/21/2000	22:35	EST	Flash Flood		0	0	0.00K	0.00K
TERRYVILLE	SUFFOLK CO.	NY	7/31/2000	13:15	EST	Flash Flood		0	0	0.00K	0.00K
AMAGANSETT	SUFFOLK CO.	NY	8/1/2000	9:10	EST	Flash Flood		0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	8/11/2000	12:30	EST	Flash Flood		0	0	0.00K	0.00K
SOUTH HUNTINGTON	SUFFOLK CO.	NY	9/2/2000	12:25	EST	Flash Flood		0	0	0.00K	0.00K
EAST FARMINGDALE	SUFFOLK CO.	NY	9/3/2000	12:30	EST	Flash Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	3/30/2001	11:00	EST	Flood		0	0	0.00K	0.00K
WEST PORTION	SUFFOLK CO.	NY	6/17/2001	12:00	EST	Flash Flood		0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	8/13/2001	13:30	EST	Flood		0	0	0.00K	0.00K
WEST PORTION	SUFFOLK CO.	NY	8/29/2002	11:30	EST	Flash Flood		0	0	0.00K	0.00K
EAST PORTION	SUFFOLK CO.	NY	8/8/2003	0:45	EST	Flash Flood		0	0	0.00K	0.00K
RONKONKOMA	SUFFOLK CO.	NY	8/10/2003	0:00	EST	Flash Flood		0	0	0.00K	0.00K
BAITING HOLLOW	SUFFOLK CO.	NY	8/17/2003	9:15	EST	Flash Flood		0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	8/17/2003	18:47	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHOLD	SUFFOLK CO.	NY	8/17/2003	19:13	EST	Flash Flood		0	0	0.00K	0.00K
MIDDLE IS	SUFFOLK CO.	NY	4/13/2004	12:05	EST	Flash Flood		0	0	0.00K	0.00K
ST JAMES	SUFFOLK CO.	NY	9/8/2004	4:20	EST	Flash Flood		0	0	0.00K	0.00K
CENTERPORT	SUFFOLK CO.	NY	9/18/2004	9:40	EST	Flash Flood		0	0	0.00K	0.00K
CENTRAL PORTION	SUFFOLK CO.	NY	9/28/2004	17:00	EST	Flash Flood		0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	7/18/2005	12:50	EST	Flash Flood		0	0	0.00K	0.00K
NORTHPORT	SUFFOLK CO.	NY	8/30/2005	13:30	EST	Flash Flood		0	0	0.00K	0.00K



NECO.											
Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
ROCKY PT	SUFFOLK CO.	NY	9/15/2005	13:30	EST	Flash Flood	• 8	0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	10/11/2005	15:00	EST	Flood		0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/11/2005	15:00	EST	Flood		0	0	0.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	10/12/2005	17:00	EST	Flood		0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/12/2005	17:00	EST	Flood		0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	10/12/2005	17:00	EST	Flood		0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	10/12/2005	17:00	EST	Flood		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	10/14/2005	17:10	EST	Flash Flood		0	0	11.000M	0.00K
NESCONSET	SUFFOLK CO.	NY	7/12/2006	23:15	EST	Flash Flood		0	0	0.00K	0.00K
YAPHANK	SUFFOLK CO.	NY	8/25/2006	11:55	EST	Flash Flood		0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	9/15/2006	16:04	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHAMPTON	CO.	NY	9/15/2006	16:04	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHOLD	SUFFOLK CO.	NY	9/15/2006	17:28	EST	Flash Flood		0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	9/15/2006	17:30	EST	Flash Flood		0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	9/15/2006	18:58	EST	Flash Flood		0	0	0.00K	0.00K
LAKE GROVE	SUFFOLK CO.	NY	10/11/2006	21:15	EST- 5	Flash Flood		0	0	0.00K	0.00K
AMAGANSETT	SUFFOLK CO.	NY	10/28/2006	11:50	EST- 5	Flash Flood		0	0	0.00K	0.00K
ISLIP	SUFFOLK CO.	NY	3/2/2007	11:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	3/2/2007	12:00	EST- 5	Flash Flood		0	0	0.00K	0.00K



No. of the last of											
Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
HUNTINGTON	SUFFOLK CO.	NY	7/18/2007	7:50	EST- 5	Flash Flood		0	0	0.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	7/18/2007	9:45	EST- 5	Flash Flood		0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	10/19/2007	15:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	5/27/2008	22:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
OAKDALE	SUFFOLK CO.	NY	7/27/2008	12:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
CALVERTON	SUFFOLK CO.	NY	7/27/2008	12:45	EST- 5	Flash Flood		0	0	0.00K	0.00K
SHIRLEY	SUFFOLK CO.	NY	7/27/2008	13:15	EST- 5	Flash Flood		0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	7/27/2008	15:06	EST- 5	Flash Flood		0	0	0.00K	0.00K
COMMACK	SUFFOLK CO.	NY	7/27/2008	15:06	EST- 5	Flash Flood		0	0	0.00K	0.00K
ART VLG	SUFFOLK CO.	NY	8/2/2008	13:42	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	8/6/2008	6:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	8/7/2008	13:47	EST- 5	Flash Flood		0	0	0.00K	0.00K
DEERFIELD	SUFFOLK CO.	NY	8/7/2008	21:15	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	8/11/2008	12:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
SOUND BEACH	SUFFOLK CO.	NY	8/15/2008	13:45	EST- 5	Flash Flood		0	0	0.00K	0.00K
RONKONKOMA	SUFFOLK CO.	NY	8/15/2008	14:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
LAKE RONKONKOMA	SUFFOLK CO.	NY	8/15/2008	14:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	8/15/2008	19:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
HALESITE	SUFFOLK CO.	NY	9/6/2008	18:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
CANOE PLACE	SUFFOLK CO.	NY	12/12/2008	5:00	EST- 5	Flood		0	0	0.00K	0.00K
ORIENT PT	SUFFOLK CO.	NY	6/3/2009	0:00	EST- 5	Flood		0	0	0.00K	0.00K
EAST ISLIP	SUFFOLK CO.	NY	6/20/2009	20:14	EST- 5	Flash Flood		0	0	0.00K	0.00K
CENTERVILLE	SUFFOLK CO.	NY	7/1/2009	0:00	EST- 5	Flood		0	0	0.00K	0.00K
FISHERS IS	SUFFOLK CO.	NY	7/1/2009	14:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
NORTH BABYLON	SUFFOLK CO.	NY	7/7/2009	16:00	EST- 5	Flash Flood		0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
HALESITE	SUFFOLK CO.	NY	3/30/2010	6:12	EST- 5	Flood		0	0	0.00K	0.00K
CENTEREACH	SUFFOLK CO.	NY	3/30/2010	7:10	EST- 5	Flood		0	0	0.00K	0.00K
CORAM AIRPARK ARPY	SUFFOLK CO.	NY	3/30/2010	8:00	EST- 5	Flood		0	0	0.00K	0.00K
WADING RIVER	SUFFOLK CO.	NY	3/30/2010	8:20	EST- 5	Flood		0	0	0.00K	0.00K
EAST HUNTINGTON	SUFFOLK CO.	NY	10/1/2010	7:12	EST- 5	Flash Flood		0	0	0.00K	0.00K
EAST NORTHPORT	SUFFOLK CO.	NY	10/1/2010	7:36	EST- 5	Flash Flood		0	0	0.00K	0.00K
BELLE TERRE	SUFFOLK CO.	NY	6/23/2011	13:53	EST- 5	Flash Flood		0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	6/23/2011	14:50	EST- 5	Flash Flood		0	0	0.00K	0.00K
ORIENT	SUFFOLK CO.	NY	6/23/2011	15:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
GREENPORT	SUFFOLK CO.	NY	6/23/2011	15:10	EST- 5	Flash Flood		0	0	0.00K	0.00K
WYANDANCH	SUFFOLK CO.	NY	8/14/2011	8:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
BAY SHR	SUFFOLK CO.	NY	8/14/2011	10:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	8/14/2011	10:45	EST- 5	Flash Flood		0	0	0.00K	0.00K
SOUND BEACH	SUFFOLK CO.	NY	8/14/2011	16:10	EST- 5	Flash Flood		0	0	0.00K	0.00K
DEER PARK	SUFFOLK CO.	NY	7/28/2012	8:30	EST- 5	Flash Flood		0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	8/10/2012	12:55	EST- 5	Flash Flood		0	0	0.00K	0.00K
BRENTWOOD	SUFFOLK CO.	NY	8/10/2012	13:09	EST- 5	Flash Flood		0	0	0.00K	0.00K
WADING RIVER	SUFFOLK CO.	NY	8/10/2012	14:00	EST- 5	Flash Flood		0	0	0.00K	0.00K
ISLIP TERRACE	SUFFOLK CO.	NY	8/15/2012	12:15	EST- 5	Flash Flood		0	0	0.00K	0.00K
SMITHTOWN	SUFFOLK CO.	NY	9/18/2012	21:45	EST- 5	Flash Flood		0	0	0.00K	0.00K
Totals:								0	0	11.000M	0.00K

Source: NOAA NCEI 2020

E.6 Groundwater Contamination

Due to natural and/or manmade groundwater contamination being an ongoing issue affecting Long Island's population directly or indirectly, former occurrences and losses/impacts in association with specific natural contamination incidences within SC are difficult to quantify. The primary impact or loss associated with natural groundwater contamination is that the groundwater source becomes no longer available for any type of use. Once pollutants enter an aquifer, the environmental damage can be severe and long-lasting, partly because of the very long time needed to flush pollutants out of the aquifer.





E.7 Hurricane

Hurricanes and tropical storms often occur at the same time. Because of this, officials assign short, distinctive names to the storms to avoid confusion among weather stations, coastal bases, and ships at sea. Since 1953, Atlantic tropical storms have been named from lists originated by the National Hurricane Center. Currently, they are maintained and updated by the World Meteorological Organization. The list of names in the table below are used in rotation and recycled every 6 years. The only time there is a change in the list is if the named storm was so costly or deadly that the future use of it would be inappropriate. If that occurs, the World Meteorological Organization committee will select a new name to replace the one removed from the list. If all the names in a season's list have been used, later storms are named for Greek letters, in alphabetical order. A storm is given a name once its winds reach a speed of 40 mph. In addition to the Atlantic list of names, there are ten other lists corresponding to other storm-prone regions of the world (NOAA NHC 2020). Table 5.4.10-1 lists the tropical cyclone names for 2020 through 2025.

Table E.5. Tropical Cyclone Names for the Atlantic

2020	2021	2022	2023	2024	2025
Arthur	Ana	Alex	Arlene	Alberto	Andrea
Bertha	Bill	Bonnie	Bret	Beryl	Barry
Cristobal	Claudette	Colin	Cindy	Chris	Chantal
Dolly	Danny	Danielle	Don	Debby	Dorian
Edouard	Elsa	Earl	Emily	Ernesto	Erin
Fay	Fred	Fiona	Franklin	Francine	Fernand
Gonzalo	Grace	Gaston	Gert	Gordon	Gabrielle
Hanna	Henri	Hermine	Harold	Helene	Humberto
Isaias	Ida	Ian	Idalia	Isaac	Imelda
Josephine	Julian	Julia	Jose	Joyce	Jerry
Kyle	Kate	Karl	Katia	Kirk	Karen
Laura	Larry	Lisa	Lee	Leslie	Lorenzo
Marco	Mindy	Martin	Margot	Milton	Melissa
Nana	Nicholas	Nicole	Nigel	Nadine	Nestor
Omar	Odette	Owen	Ophelia	Oscar	Olga
Paulette	Peter	Paula	Philippe	Patty	Pablo
Rene	Rose	Richard	Rina	Rafael	Rebekah
Sally	Sam	Shary	Sean	Sara	Sebastien
Teddy	Teresa	Tobias	Tammy	Tony	Tanya
Vicky	Victor	Virginie	Vince	Valerie	Van
Wilfred	Wanda	Walter	Whitney	William	Wendy

Source: NOAA 2020

Hurricane events from 1635 to 2013 are listed in the table below.

Table E-6. Hurricane Events, 1635-2013

Event Date / Name	Location	Losses / Impacts
August 15, 1635 (1st documented hurricane in NY)	L.I.	NA (Storm Surge 14-feet above high tide)





Location	Losses / Impacts
L.I.	Fire Island Cut broken through
L.I. (Center	Many structures damaged including Montauk
Moriches)	Lighthouse
L.I.	21 deaths
L.I.	NA
Central L.I.	Little damage/impact
SC	NA
SC	NA
SC	NA
L.I.	Minor impacts
L.I.	Beach erosion, street flooding, coastal ship wrecks
L.I.	Minor Impacts
L.I.	Minor Impacts
L.I.	Minor Impacts
L.I.	Minor Impacts Wind Gust > 100 mph
Northeastern L.I.	Minor Impacts
L.I.	Minor impacts
L.I.	Minor Impacts
L.I.	Minor Impacts
	Fallen trees, damaged boats
L.I.	Approximately \$6.2 M, multiple deaths, Shinnecock Inlet created, Moriches Inlet widened
Southeast	Damage > \$800 K, 2 Coast Guard Cutters & 1
NYS	Navy Destroyer sunk in or near SC
L.I.	Approximately \$3 M in damages
L.I.	Minor impact, but dropped 9 inches of rain on SC Wind Gust > 87 mph
Southeastern NYS	Millions - but not quantified
L.I.	Minor Impacts
	L.I. L.I. (Center Moriches) L.I. L.I. Central L.I. SC SC SC L.I. Southeast NYS L.I. L.I. Southeastern NYS



Event Date / Name	Location	Losses / Impacts
September 12, 1960	L.I.	Approximately \$1.9 M in damages
Hurricane Donna		
September 21, 1961	L.I.	Major power outages
Hurricane Esther) () () () () () () () () () (
June 14, 1966	L.I.	Minor Impacts
Tropical Storm Alma September 6-11, 1969	L.I.	Minor Impacts
Hurricane Gerda	L.1.	Williof Impacts
August 28, 1971	L.I.	Minor Impacts
Tropical Storm Doria		
(FEMA DR-311)		
June 22, 1972	L.I.	Minor Impacts
Tropical Storm Agnes		
August 6-10, 1976	SC	Approximately \$2.5 M
Hurricane Belle (FEMA DR-520)		
1979	SC	Major power outages
Hurricane David	SC	Major power outages
Hufficanc David		
1982	L.I.	1 of top 3 erosion events
Hurricane Cindy		-
0 1 27 1005	T T	A
October 27, 1985 Hurricane Gloria (FEMA DR-750)	L.I.	Approximately \$48.5 M in damages, wind damage, beach erosion
August 17-19, 1991	L.I.	Approximately \$11.8 M in damages, spawned 2
Hurricane Bob (FEMA DR-918)	L.I.	tornadoes on L.I.
August 14, 1995	Southeastern	Beach erosion, two houses washed away in East
Hurricane Felix	NYS	Hampton
July 13, 1996	L.I.	Major power outages, knocked down trees,
Tropical Storm Bertha		significant wind damage
		Wind Gust > 74 mph
October 8-9, 1996	L.I.	Minor Impact
Tropical Storm Josephine September 16, 1999	Eastern NYS	A managina da la GC2 Q M in demonstrato 12 acception
September 16, 1999 Tropical Storm Floyd	(including	Approximately \$62.2 M in damages to 12 counties in eastern NYS; Approximately \$169 K in disaster
(FEMA DR-1296)	SC)	aid to Huntington, Asharoken and Patchogue, SC.
(12,111,121,12,12)	50)	Power outages and beach erosion
August 15, 2004	L.I.	Minor Impacts
Hurricane Charley		
October 14, 2005	SC	Approx. \$ 43 M (\$23 M in residential damage, \$6.5
(Flooding - Remnants of Hurricane		M in agricultural loss and \$14 M in municipal
Wilma)		damage)
September 2, 2006	L.I.	Beach Erosion, Power Outages
Tropical Storm Ernesto	(Hempstead and Babylon)	
	and Dabyton)	

Sources: Suffolk County HMP 2014; NOAA NCEI 2020

E.8 Infestation and Invasive Species

Asian Longhorned Beetle (ALB)

A brief ALB timeline of NYS Activities was provided by USDA Animal and Plant Health Inspection Service (APHIS) from 1996 to 2006 and the New York City Department of Parks and Recreation provided updated ALB info for 2007.





- August 19, 1996: ALB detected in the Greenpoint neighborhood of Brooklyn, NY. This was the first ALB detection in the U.S.
- August 1996: ALB detected in Amityville on Long Island, NY a few weeks after the first detection.
- February 10, 1999: ALB detected in the Bayside area of Queens County, NY.
- September 1, 1999: ALB detected in the Islip area of Long Island, NY.
- June 29, 2000: ALB detected in the Luther Gulick Playground in the Lower East Side area of Manhattan.
- 2006: ALB detection in New York City: Manhattan, Queens and Brooklyn
- 2007: Most recent ALB infestation areas were found in Queens and Staten Island (NYCDPR 2007)

ALBs have caused serious tree losses in both NYS and Chicago, IL, particularly in New York City. Since its initial discovery in NYS in 1996, tree destruction and removal has been the only method for controlling the spread of ALB infestation. According to Mark Buccowich of the USDA Forest Service on November 15, 2001, ALB infestations were responsible for the destruction of a combined 7,900 trees in the quarantined areas in NYS and Illinois between 1998 and 2001. As of 2005, the NY ALB Cooperative Eradication Program reports that NYS agricultural officials removed and destroyed more than 7,190 trees in and around New York City and Long Island. However, this number of tree losses differs amongst various sources. Table E-7 provides USDA data on the various areas of NYS that have been under quarantine, the date ALB were first found in that quarantine area, and the total number of infested trees found and removed in that area and cumulatively in NYS as of March 2006 (USDAFS 2005).

Table E-7. New York ALB Detection and Tree Removal Summary

Quarantine Zone	Date of First Detection	Most Recent Detection	Total # of Trees to Date
Brooklyn	1996	2006	2,200
Queens	1998	2006	1,777
Manhattan	1999	2006	108
Central Long Island	1996	2006	1,929
Islip	1999	2006	27
Total	N/A	N/A	6,041

Source: USDA 2006

Note: It is assumed that these numbers have fluctuated since 2006.

According to Senator Hillary Clinton in April 2007, the ALB puts 35 percent of American urban trees at serious risk, at a combined replacement value of \$669 billion. The threat is even greater in New York City, with 47 percent of its 5.2 million trees susceptible to ALB infestation (Clinton 2007).

Many more trees have had to be treated with insecticides to decrease beetle populations and prevent future tree loss. According to a May 2004 news article by the NY ALB Cooperative Eradication Program, the USDA APHIS indicated that approximately 69,000 trees susceptible to the ALB in NYS would have to be treated. Approximately 12,500 trees in Manhattan; 23,000 in Brooklyn; 24,500 in Queens and 9,000 on Long Island were to be treated (APHIS 2004). More recently, a March 28, 2005 NY ALB Cooperative Eradication Program Quarterly Report, indicated that the number of trees to be treated increased to approximately 78,200 trees susceptible to the ALB in NYS. APHIS was to treat trees in portions of the 132 square miles of the quarantine



area in NYS. Approximately 18,400 trees in Manhattan; 35,500 in Brooklyn; 19,400 in Queens and 4,900 on Long Island were to be treated. Current status of these trees is not made available (USDA 2005).

E.9 Nor'Easter

Nor'Easter events from 1897 to 2013 are listed in the table below.

Table E-8. Nor'Easter Events, 1897-2013

T . T . 15		, , , , ,
Event Date / Name	Location	Losses / Impacts
Nor'Easter October 24, 1897	SC	Separated Orient Village from the North Fork
Nor'Easter March 4, 1931	SC	Created Moriches Inlet, severe beach erosion and structural damage
Nor'Easter November 25, 1950	SC	NA
Nor'Easter November 6-7, 1953	SC	NA
Nor'Easter October 14-16, 1955	SC	NA
Nor'Easter April 13, 1961	SC	NA
Nor'Easter / Flooding March 6-8 1962 (FEMA DR-129) "Ash Wednesday Storm" or "Great Atlantic Storm of 1962"	Southeastern NYS, throughout L.I.	Resulted in total damages of \$130 M in damages and 40 deaths, \$714 K in disaster aid throughout SC, Millions in damages to Fire Island
Nor'Easter November 12-13, 1968	SC	NA
Nor'Easter / Blizzard February 1969	L.I.	25 + inches of snow
Nor'Easter February 19, 1972	SC	NA
Nor'Easter November 7, 1973	SC	NA
Nor'Easter February 6-7, 1978 (one of largest)	SC (North Shore - Peconic Bay)	NA
Nor'Easter October 30-31, 1991 "The Perfect Storm" or "Halloween Storm of 1991"	Northeastern U.S.	\$2.6 B in total damages, 9 deaths (1 of top 3 erosion events)
Nor'Easter December 11-13, 1992 (FEMA DR-974)	Southeastern NYS	Approx. \$31.2 M in damages, severe beach erosion on South Shores, destruction in North Fork, new inlets, 100 + structures damaged
Nor'Easter / Blizzard March 12-14, 1993 (FEMA EM-3107) "Superstorm of 1993" or "Storm of the Century" Also identified as a Winter Storm	Statewide	Approx. \$8.5 M in total damages
Nor'Easter January 1994	SC	NA



Event Date / Name	Location	Losses / Impacts
Nor'Easter / Blizzard January 6-8	Southern NYS	Approx. \$21.4 M, 27+ inches of snow throughout
1996		NYS
(FEMA DR-1083) "Blizzard of '96"		
Nor'Easter	Northeastern	Approx. \$16.1 M in total damages (NYS HMP) - Approx. \$3.5 M
October 19-20, 1996	U.S., Suffolk	in disaster aid to the two counties, \$286 K in additional federal
(FEMA DR-1146)	and	aid to SC
,	Westchester	
	Counties	
Nor'Easter	L.I.	12 + inches of snow
March /April 1997		
"April Fools Nor'Easter" Nor'Easter	Central L.I	Unknown
March 5-7, 2001	SC (Most	Unknown
Waten 5-7, 2001	snow:	
	Centereach,	
	Huntington,	
	Ridge)	
December 26, 2002	SC (Dix Hills,	Snow amounts ranged from 9 to 20 inches
"Christmas Nor'Easter"	Centereach,	
	Lindenhurst,	
27.47	and Islip)	
Nor'Easter	L.I.	Total losses = \$20 M throughout northeastern U.S. (14 - 24
February 2003 Nor'Easter	L.I.	inches of snow) Moderate to severe erosion on some South Shore beaches
December 2003	L.1.	Woderate to severe crosion on some South Shore beaches
Becomber 2003		
Nor'Easter	Multi-State	Islip received 20 inches of snow)
February 11, 2006		
Nor'Easter	Multi-State	Major flooding and coastal erosion throughout County
April 14-16, 2007	With-State	(Approximately \$26 M in damage)
(FEMA DR-1692)		(ripproximately \$20 fit in damage)
Nor'Easter	Suffolk County	Severe storms and coastal flooding caused an estimated \$17 M in
November 12-14, 2009		damages. Severe beach erosion and cuts into the dunes occurred
		along the Atlantic Ocean facing beaches.
Nor'Easter	Suffolk County	Between March 12th and 15th, rainfall totals in Suffolk County
March 13-31, 2010		ranged between 2.26 inches and 4.93 inches. Wind gusts ranged between 47 mph and 69 mph.
		between 47 mpn and 69 mpn.
		Between March 22nd and 23rd, rainfall totals in Suffolk County
		ranged between 0.85 inches and 1.82 inches.
		Between March 29th and 31st, rainfall totals for Suffolk County
		ranged between 4.33 inches and 8.83 inches. Peak wind gusts in
		the County ranged from 30 mph to 50 mph, with wind gusts of 38 mph in the Village of Westhampton Beach.
		inpit in the vinage of westilampion beach.
		FEMA issued a disaster declaration for this event and Suffolk
		County was included in this declaration. Suffolk County was
		approved for PA. FEMA approved \$86,529,838.16 in PA grant
N. JE	G CC 11 G	assistance.
Nor'Easter	Suffolk County	Snowfall totals for Suffolk County ranged between 1.1 inches and
November / /101/1		5.8 inches. Wind gusts ranged between 44 mph and 58 mph.
November 7, 2012	Suffolk County	
November 7, 2012 Nor'Easter December 26-27, 2012	Suffolk County	The storm brought strong winds and some coastal flooding. \$2,000 in property damages from the high winds (gusts up to 68

Source: Suffolk HMP 2014; Suffolk HMP 2020





E.10 Severe Storm

Severe storm events from 1996 to 2013 are listed in the table below.



Table E-9. Severe Storm Events, 1996-2013

Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
Totals:	County/Zone	31.	Date	Time	1 . Z.	Туре	Mag	7	18	7.264M	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	9/8/1958	16:00	CST	Tornado	F0	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	9/18/1973	7:24	CST	Tornado	F1	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	3/21/1974	12:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/10/1979	14:45	CST	Tornado	F1	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	10/5/1979	20:30	CST	Thunderstorm Wind	70 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	6/3/1980	8:30	CST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/5/1981	11:15	CST	Tornado	F1	0	0	250.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	10:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	10:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	12:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	12:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	13:15	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/20/1982	14:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/25/1982	14:00	CST	Tornado	F0	0	0	0.03K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/11/1983	18:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	6/13/1984	18:25	CST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
SUFFOLK CO.	SUFFOLK CO.	NY	7/3/1984	16:20	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	6/24/1985	12:01	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	6/24/1985	13:00	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/30/1985	10:30	CST	Tornado	F1	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/7/1989	19:15	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/7/1989	19:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/7/1989	19:45	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/10/1989	17:00	CST	Hail	2.50 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/10/1989	17:15	CST	Tornado	F2	0	1	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/14/1989	15:10	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	10/15/1989	3:00	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	11/20/1989	20:55	CST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	11/20/1989	21:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	5/10/1990	18:50	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/9/1990	16:30	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/28/1990	23:15	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	9/2/1990	20:00	CST	Hail	0.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	10/18/1990	21:20	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SUFFOLK CO.	SUFFOLK CO.	NY	10/18/1990	21:40	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	5/30/1991	17:37	CST	Hail	1.50 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/23/1991	14:35	CST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	7/23/1991	15:30	CST	Hail	1.75 in.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/19/1991	11:30	EST	Tornado	F1	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/19/1991	12:00	EST	Tornado	F1	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/11/1992	15:00	PST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/11/1992	15:29	PST	Thunderstorm Wind	55 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/11/1992	16:02	PST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	SUFFOLK CO.	NY	8/28/1992	20:53	PST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Huntington	SUFFOLK CO.	NY	5/25/1994	16:55	EST	Hail	0.75 in.	0	0	0.00K	0.00K
S. Hampton	SUFFOLK CO.	NY	8/5/1994	16:20	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Hauppauge	SUFFOLK CO.	NY	4/4/1995	13:48	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
Wading River	SUFFOLK CO.	NY	4/22/1995	3:20	EST	Hail	0.75 in.	0	0	0.00K	0.00K
Smithtown	SUFFOLK CO.	NY	5/29/1995	22:15	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Bridgehampton	SUFFOLK CO.	NY	6/12/1995	2:25	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
Orient Pt.	SUFFOLK CO.	NY	6/20/1995	16:45	EST	Hail	1.75 in.	0	0	0.00K	0.00K
Flanders	SUFFOLK CO.	NY	6/20/1995	18:00	EST	Hail	1.00 in.	0	0	0.00K	0.00K



County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
SUFFOLK CO.	NY	7/23/1995	17:46	EST	Tornado	F0	0	0	500.00K	0.00K
SUFFOLK CO.	NY	10/21/1995	10:30	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	10/21/1995	11:55	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	10/21/1995	15:25	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	10/21/1995	15:30	EST	Thunderstorm Wind	0 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	1/19/1996	9:00	EST	High Wind		0	0	0.00K	0.00K
SUFFOLK CO.	NY	1/27/1996	8:00	EST	High Wind		0	0	0.00K	0.00K
SUFFOLK CO.	NY	2/25/1996	10:00	EST	High Wind		0	0	0.00K	0.00K
SUFFOLK CO.	NY	3/19/1996	14:00	EST	High Wind		0	0	0.00K	0.00K
SUFFOLK CO.	NY	7/8/1996	23:15	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	NY	10/8/1996	20:45	EST	High Wind	50 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	10/19/1996	10:00	EST	High Wind	80 kts.	0	0	0.00K	0.00K
SUFFOLK CO.	NY	3/6/1997	7:48	EST	High Wind	61 kts.	0	0	0.00K	0.00K
	SUFFOLK CO. SUFFOLK CO.	SUFFOLK CO. NY SUFFOLK CO. NY	SUFFOLK CO. NY 7/23/1995 SUFFOLK CO. NY 10/21/1995 SUFFOLK CO. NY 10/21/1995 SUFFOLK CO. NY 10/21/1995 SUFFOLK CO. NY 10/21/1995 SUFFOLK CO. NY 1/19/1996 SUFFOLK CO. NY 1/27/1996 SUFFOLK CO. NY 2/25/1996 SUFFOLK CO. NY 3/19/1996 SUFFOLK CO. NY 7/8/1996 SUFFOLK CO. NY 10/8/1996 SUFFOLK (ZONE) NY 10/19/1996	SUFFOLK CO. NY 7/23/1995 17:46 SUFFOLK CO. NY 10/21/1995 10:30 SUFFOLK CO. NY 10/21/1995 11:55 SUFFOLK CO. NY 10/21/1995 15:25 SUFFOLK CO. NY 1/19/1996 9:00 SUFFOLK CO. NY 1/27/1996 8:00 SUFFOLK CO. NY 2/25/1996 10:00 SUFFOLK CO. NY 3/19/1996 14:00 SUFFOLK CO. NY 7/8/1996 23:15 SOUTHEAST SUFFOLK (ZONE) NY 10/8/1996 20:45 SUFFOLK CO. NY 10/19/1996 10:00	SUFFOLK CO. NY 7/23/1995 17:46 EST SUFFOLK CO. NY 10/21/1995 10:30 EST SUFFOLK CO. NY 10/21/1995 11:55 EST SUFFOLK CO. NY 10/21/1995 15:25 EST SUFFOLK CO. NY 1/19/1996 9:00 EST SUFFOLK CO. NY 1/27/1996 8:00 EST SUFFOLK CO. NY 2/25/1996 10:00 EST SUFFOLK CO. NY 3/19/1996 14:00 EST SUFFOLK CO. NY 7/8/1996 23:15 EST SUFFOLK CO. NY 10/8/1996 20:45 EST SUFFOLK CO. NY 10/19/1996 10:00 EST	SUFFOLK CO. NY 7/23/1995 17:46 EST Tornado SUFFOLK CO. NY 10/21/1995 10:30 EST Thunderstorm Wind SUFFOLK CO. NY 10/21/1995 11:55 EST Thunderstorm Wind SUFFOLK CO. NY 10/21/1995 15:25 EST Thunderstorm Wind SUFFOLK CO. NY 10/21/1995 15:30 EST Thunderstorm Wind SUFFOLK CO. NY 1/19/1996 9:00 EST High Wind SUFFOLK CO. NY 1/27/1996 8:00 EST High Wind SUFFOLK CO. NY 3/19/1996 10:00 EST High Wind SUFFOLK CO. NY 7/8/1996 23:15 EST Thunderstorm Wind SUFFOLK CO. NY 10/8/1996 20:45 EST High Wind SUFFOLK CO. NY 10/8/1996 20:45 EST High Wind	SUFFOLK CO. NY 10/21/1995 10:30 EST Thunderstorm Wind O kts.	SUFFOLK CO. NY 7/23/1995 17:46 EST Tornado F0 0	SUFFOLK CO. NY 7/23/1995 17:46 EST Tornado FO 0 0	SUFFOLK CO. NY 7/23/1995 17:46 EST Tornado FO 0 0 500.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
KINGS PARK	SUFFOLK CO.	NY	5/1/1997	16:15	EST	Hail	1.00 in.	0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	5/16/1997	11:44	EST	Strong Wind		1	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	6/22/1997	14:40	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	6/22/1997	15:45	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	6/26/1997	15:53	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
FIRE ISLAND	SUFFOLK CO.	NY	6/26/1997	16:25	EST	Tornado	F0	0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	7/18/1997	13:35	EST	Thunderstorm Wind	52 kts.	0	5	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	7/18/1997	13:50	EST	Hail	1.00 in.	0	0	0.00K	0.00K
BROOKHAVEN	SUFFOLK CO.	NY	7/18/1997	20:20	EST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
NWS UPTON	SUFFOLK CO.	NY	7/18/1997	20:45	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
NORTH BABYLON	SUFFOLK CO.	NY	8/16/1997	17:18	EST	Thunderstorm Wind	56 kts.	0	0	0.00K	0.00K
Countywide	SUFFOLK CO.	NY	11/1/1997	15:00	EST	Strong Wind		0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	12/29/1997	20:45	EST	High Wind	50 kts.	0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	12/30/1997	11:50	EST	High Wind	56 kts.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
HUNTINGTON	SUFFOLK CO.	NY	5/6/1998	19:40	EST	Hail	0.75 in.	0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	6/26/1998	15:18	EST	Hail	0.75 in.	0	0	0.00K	0.00K
DEER PARK	SUFFOLK CO.	NY	6/26/1998	15:38	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
RONKONKOMA	SUFFOLK CO.	NY	6/26/1998	15:45	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
DEER PARK	SUFFOLK CO.	NY	6/26/1998	16:15	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	6/26/1998	16:15	EST	Hail	0.75 in.	0	0	0.00K	0.00K
WYANDANCH	SUFFOLK CO.	NY	6/30/1998	7:00	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
HAUPPAUGE	SUFFOLK CO.	NY	6/30/1998	7:10	EST	Hail	0.75 in.	0	0	0.00K	0.00K
LAKE RONKONKOMA	SUFFOLK CO.	NY	6/30/1998	7:15	EST	Tornado	F1	0	0	0.00K	0.00K
SELDEN	SUFFOLK CO.	NY	6/30/1998	7:20	EST	Tornado	F0	0	0	0.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	6/30/1998	7:30	EST	Hail	1.00 in.	0	0	0.00K	0.00K
CORAM	SUFFOLK CO.	NY	6/30/1998	7:30	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
NORTH BABYLON	SUFFOLK CO.	NY	6/30/1998	19:36	EST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	6/30/1998	19:40	EST	Tornado	F1	0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	9/7/1998	14:08	EST	Thunderstorm Wind	61 kts.	0	0	0.00K	0.00K
WEST BABYLON	SUFFOLK CO.	NY	9/7/1998	14:15	EST	Thunderstorm Wind	63 kts.	1	2	0.00K	0.00K
EAST PATCHOGUE	SUFFOLK CO.	NY	9/7/1998	14:30	EST	Hail	0.75 in.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Ini	PrD	CrD
BROOKHAVEN	SUFFOLK CO.	NY	9/7/1998	14:45	EST	Thunderstorm Wind	52 kts.	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	11/11/1998	7:00	EST	High Wind	51 kts.	0	0	0.00K	0.00K
SAYVILLE	SUFFOLK CO.	NY	1/18/1999	19:25	EST	Thunderstorm Wind	75 kts.	0	0	0.00K	0.00K
LLOYD HARBOR	SUFFOLK CO.	NY	7/19/1999	15:05	EST	Thunderstorm Wind	50 kts.	0	0	0.00K	0.00K
PORT JEFFERSON	SUFFOLK CO.	NY	8/5/1999	15:00	EST	Hail	0.88 in.	0	0	0.00K	0.00K
CENTEREACH	SUFFOLK CO.	NY	8/5/1999	15:00	EST	Thunderstorm Wind	58 kts.	0	0	0.00K	0.00K
FARMINGVILLE	SUFFOLK CO.	NY	8/5/1999	15:16	EST	Hail	0.75 in.	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	8/8/1999	7:28	EST	Tornado	F2	0	1	1.000M	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	3/11/2000	18:10	EST	Thunderstorm Wind	70 kts. E	0	4	0.00K	0.00K
WADING RIVER	SUFFOLK CO.	NY	5/18/2000	18:10	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
NEW SUFFOLK	SUFFOLK CO.	NY	5/24/2000	18:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
STONY BROOK	SUFFOLK CO.	NY	6/2/2000	19:03	EST	Thunderstorm Wind	50 kts. E	0	1	0.00K	0.00K
SMITHTOWN	SUFFOLK CO.	NY	6/2/2000	19:12	EST	Funnel Cloud		0	0	0.00K	0.00K
SMITHTOWN	SUFFOLK CO.	NY	6/2/2000	19:12	EST	Hail	0.75 in.	0	0	0.00K	0.00K
WADING RIVER	SUFFOLK CO.	NY	6/2/2000	19:17	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
RIVERHEAD	SUFFOLK CO.	NY	6/11/2000	16:30	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHOLD	SUFFOLK CO.	NY	9/15/2000	5:20	EST	Tornado	F1	0	0	0.00K	0.00K
Countywide	SUFFOLK CO.	NY	12/12/2000	9:05	EST	High Wind	50 kts. E	0	2	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	12/17/2000	13:52	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
SOUTHOLD	SUFFOLK CO.	NY	12/17/2000	15:00	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
Countywide	SUFFOLK CO.	NY	5/21/2001	17:00	EST	High Wind		0	0	0.00K	0.00K
HAMPTON BAYS	SUFFOLK CO.	NY	7/1/2001	0:30	EST	Tornado	F0	0	0	0.00K	0.00K
SHINNECOCK HILLS	SUFFOLK CO.	NY	7/1/2001	0:33	EST	Funnel Cloud		0	0	0.00K	0.00K
SHINNECOCK HILLS	SUFFOLK CO.	NY	7/1/2001	0:35	EST	Tornado	F0	0	0	0.00K	0.00K
SHINNECOCK HILLS	SUFFOLK CO.	NY	7/1/2001	0:35	EST	Hail	1.75 in.	0	0	0.00K	0.00K
WATER MILL	SUFFOLK CO.	NY	7/1/2001	0:40	EST	Thunderstorm Wind	61 kts. E	0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	7/1/2001	15:05	EST	Thunderstorm Wind	52 kts. E	0	0	0.00K	0.00K
RIVERHEAD	SUFFOLK CO.	NY	7/1/2001	16:15	EST	Thunderstorm Wind	52 kts. E	0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	7/1/2001	16:45	EST	Thunderstorm Wind	52 kts. E	0	0	0.00K	0.00K
STONY BROOK	SUFFOLK CO.	NY	7/11/2001	7:10	EST	Thunderstorm Wind	53 kts. M	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
RIDGE	SUFFOLK CO.	NY	7/11/2001	7:30	EST	Hail	0.75 in.	0	0	0.00K	0.00K
FLANDERS	SUFFOLK CO.	NY	7/11/2001	8:00	EST	Hail	0.75 in.	0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	7/11/2001	8:05	EST	Thunderstorm Wind	52 kts. E	0	0	0.00K	0.00K
HAUPPAUGE	SUFFOLK CO.	NY	8/10/2001	15:00	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	8/10/2001	15:30	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	6/26/2002	17:30	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
EATONS NECK	SUFFOLK CO.	NY	6/28/2002	19:35	EST	Thunderstorm Wind	67 kts. M	0	0	0.00K	0.00K
DAVIS PARK	SUFFOLK CO.	NY	6/28/2002	20:00	EST	Thunderstorm Wind	60 kts. E	0	0	0.00K	0.00K
COMMACK	SUFFOLK CO.	NY	8/2/2002	18:00	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
DIX HILLS	SUFFOLK CO.	NY	8/2/2002	18:05	EST	Thunderstorm Wind	50 kts. E	0	0	0.00K	0.00K
Countywide	SUFFOLK CO.	NY	9/11/2002	10:00	EST	High Wind		0	0	0.00K	0.00K
WADING RIVER	SUFFOLK CO.	NY	3/21/2003	20:30	EST	Hail	0.88 in.	0	0	0.00K	0.00K
BAITING HOLLOW	SUFFOLK CO.	NY	3/21/2003	20:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
WEST ISLIP	SUFFOLK CO.	NY	6/14/2003	15:30	EST	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	6/30/2003	13:00	EST	Hail	1.75 in.	0	0	0.00K	0.00K
MEDFORD STATION	SUFFOLK CO.	NY	6/30/2003	13:45	EST	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
NORTH HAVEN	SUFFOLK CO.	NY	6/30/2003	13:45	EST	Hail	1.75 in.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
OLD FIELD	SUFFOLK CO.	NY	8/16/2003	16:30	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
Countywide	SUFFOLK CO.	NY	11/13/2003	10:38	EST	High Wind	56 kts. MG	0	0	0.00K	0.00K
EAST ISLIP	SUFFOLK CO.	NY	5/24/2004	17:51	EST	Hail	2.00 in.	0	0	0.00K	0.00K
NESCONSET	SUFFOLK CO.	NY	5/24/2004	18:02	EST	Hail	1.00 in.	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	5/24/2004	18:48	EST	Hail	0.75 in.	0	0	0.00K	0.00K
EAST ISLIP	SUFFOLK CO.	NY	5/24/2004	19:38	EST	Hail	1.00 in.	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	9/18/2004	10:15	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	12/1/2004	12:39	EST	High Wind	61 kts. MG	0	0	0.00K	0.00K
ROCKY PT	SUFFOLK CO.	NY	8/5/2005	14:19	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
LAUREL	SUFFOLK CO.	NY	8/5/2005	14:51	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
ORIENT	SUFFOLK CO.	NY	8/5/2005	15:15	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WEST ISLIP	SUFFOLK CO.	NY	8/5/2005	17:00	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/16/2005	10:25	EST	Strong Wind	38 kts. EG	0	0	1.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	10/25/2005	6:01	EST	Strong Wind	40 kts. MG	0	0	1.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
NORTHEAST AND SOUTHEAST SUFFOLK (ZONE)	NORTHEAST AND SOUTHEAST SUFFOLK (ZONE)	NY	12/9/2005	11:45	EST	High Wind	50 kts. EG	0	0	0.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	1/18/2006	8:00	EST	High Wind	50 kts. EG	0	0	0.00K	0.00K
SOUTHEAST AND SOUTHWEST SUFFOLK (ZONE)	SOUTHEAST AND SOUTHWEST SUFFOLK (ZONE)	NY	2/17/2006	13:59	EST	High Wind	51 kts. MG	0	0	0.00K	0.00K
ST JAMES	SUFFOLK CO.	NY	7/11/2006	16:45	EST	Hail	0.75 in.	0	0	0.00K	0.00K
HUNTINGTON	SUFFOLK CO.	NY	7/12/2006	22:40	EST	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LINDENHURST	SUFFOLK CO.	NY	7/18/2006	21:40	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
WEST ISLIP	SUFFOLK CO.	NY	7/18/2006	22:00	EST	Hail	0.88 in.	0	0	0.00K	0.00K
SAYVILLE	SUFFOLK CO.	NY	7/18/2006	22:30	EST	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SHINNECOCK HILLS	SUFFOLK CO.	NY	7/18/2006	22:46	EST	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
AMITYVILLE	SUFFOLK CO.	NY	8/25/2006	11:05	EST	Tornado	F0	0	0	0.00K	0.00K
NORTHWEST, NORTHEAST, AND SOUTHWEST SUFFOLK (ZONE)	NORTHWEST, NORTHEAST, AND SOUTHWEST SUFFOLK (ZONE)	NY	10/28/2006	10:06	EST-5	High Wind	50 kts. EG	0	0	0.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	12/1/2006	18:30	EST-5	High Wind	50 kts. EG	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	3/3/2007	15:15	EST-5	Strong Wind	45 kts. EG	0	0	1.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	4/15/2007	12:45	EST-5	High Wind	53 kts. MG	0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	4/15/2007	13:45	EST-5	High Wind	50 kts. EG	0	0	0.00K	0.00K
RIVERHEAD	SUFFOLK CO.	NY	6/1/2007	19:07	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
NORTH LINDENHURST	SUFFOLK CO.	NY	6/28/2007	18:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
AQUEBOGUE	SUFFOLK CO.	NY	7/6/2007	16:15	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
CENTERPORT	SUFFOLK CO.	NY	7/6/2007	18:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
OAKDALE	SUFFOLK CO.	NY	7/18/2007	8:15	EST-5	Thunderstorm Wind	60 kts. EG	0	0	0.00K	0.00K
ISLIP TERRACE	SUFFOLK CO.	NY	7/18/2007	8:25	EST-5	Tornado	EF1	0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	10/11/2007	16:13	EST-5	Thunderstorm Wind	50 kts. EG	0	0	0.00K	0.00K
SOUTHEAST AND SOUTHWEST SUFFOLK (ZONE)	SOUTHEAST AND SOUTHWEST SUFFOLK (ZONE)	NY	11/3/2007	12:15	EST-5	High Wind	50 kts. MS	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	2/1/2008	20:12	EST-5	High Wind	51 kts. MG	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
WADING RIVER	SUFFOLK CO.	NY	3/5/2008	5:30	EST-5	Thunderstorm Wind	55 kts. EG	0	0	0.00K	0.00K
SHELTER IS	SUFFOLK CO.	NY	6/8/2008	16:00	EST-5	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
MASTIC	SUFFOLK CO.	NY	6/8/2008	16:10	EST-5	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K
EASTPORT	SUFFOLK CO.	NY	6/8/2008	16:14	EST-5	Thunderstorm Wind	70 kts. EG	0	0	0.00K	0.00K
SPRINGS	SUFFOLK CO.	NY	6/8/2008	16:18	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
JERICHO	SUFFOLK CO.	NY	6/8/2008	16:19	EST-5	Thunderstorm Wind	50 kts. MG	0	0	0.00K	0.00K
AMAGANSETT	SUFFOLK CO.	NY	6/8/2008	16:19	EST-5	Thunderstorm Wind	61 kts. EG	0	0	0.00K	0.00K
NORTH LINDENHURST	SUFFOLK CO.	NY	6/8/2008	16:50	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
NORTHPORT	SUFFOLK CO.	NY	6/16/2008	18:34	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
NORTHPORT	SUFFOLK CO.	NY	6/16/2008	18:35	EST-5	Thunderstorm Wind	61 kts. EG	0	0	50.00K	0.00K
SOUTH MANOR	SUFFOLK CO.	NY	6/16/2008	19:19	EST-5	Thunderstorm Wind	61 kts. EG	0	0	1.00K	0.00K
SOUTH SETAUKET	SUFFOLK CO.	NY	6/18/2008	16:15	EST-5	Funnel Cloud		0	0	0.00K	0.00K
ORIENT	SUFFOLK CO.	NY	6/18/2008	19:10	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	6/23/2008	13:38	EST-5	Thunderstorm Wind	61 kts. EG	0	0	2.00K	0.00K
BEIXEDON ESTATES	SUFFOLK CO.	NY	6/23/2008	13:40	EST-5	Thunderstorm Wind	70 kts. EG	0	0	10.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	6/30/2008	2:22	EST-5	Thunderstorm Wind	60 kts. EG	0	0	2.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Inj	PrD	CrD
OAK BEACH	SUFFOLK CO.	NY	7/2/2008	11:15	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
SMITHTOWN	SUFFOLK CO.	NY	7/27/2008	11:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	7/27/2008	11:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	7/27/2008	12:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
SHORE ACRES	SUFFOLK CO.	NY	7/27/2008	12:50	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
SOUTH HAVEN	SUFFOLK CO.	NY	7/27/2008	13:10	EST-5	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
DEERFIELD	SUFFOLK CO.	NY	8/2/2008	13:28	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
CENTERPORT	SUFFOLK CO.	NY	8/7/2008	12:33	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
CENTEREACH	SUFFOLK CO.	NY	8/7/2008	19:23	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
MATTITUCK	SUFFOLK CO.	NY	8/7/2008	19:29	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
JAMESPORT	SUFFOLK CO.	NY	8/7/2008	19:40	EST-5	Thunderstorm Wind	70 kts. EG	0	0	20.00K	0.00K
RIDGE	SUFFOLK CO.	NY	8/7/2008	20:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
UPTON	SUFFOLK CO.	NY	8/7/2008	20:10	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
SOUTH MANOR	SUFFOLK CO.	NY	8/7/2008	20:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
SOUTH MANOR	SUFFOLK CO.	NY	8/7/2008	20:25	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
MANORVILLE	SUFFOLK CO.	NY	8/7/2008	20:30	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
RIDGE	SUFFOLK CO.	NY	8/7/2008	20:39	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
RIDGE	SUFFOLK CO.	NY	8/7/2008	20:49	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
CENTER MORICHES	SUFFOLK CO.	NY	8/8/2008	17:27	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.50K	0.00K
CENTER MORICHES	SUFFOLK CO.	NY	8/8/2008	17:27	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
EAST SETAUKET	SUFFOLK CO.	NY	8/11/2008	11:55	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
EAST SETAUKET	SUFFOLK CO.	NY	8/11/2008	12:00	EST-5	Hail	1.25 in.	0	0	0.00K	0.00K
BELLE TERRE	SUFFOLK CO.	NY	8/11/2008	12:11	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
NORTHPORT	SUFFOLK CO.	NY	8/11/2008	12:15	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
SOUND BEACH	SUFFOLK CO.	NY	8/11/2008	12:15	EST-5	Funnel Cloud		0	0	0.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	8/11/2008	12:20	EST-5	Hail	1.25 in.	0	0	0.00K	0.00K
EAST SETAUKET	SUFFOLK CO.	NY	8/11/2008	20:24	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
BABYLON	SUFFOLK CO.	NY	8/14/2008	16:30	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
BAY SHR	SUFFOLK CO.	NY	8/14/2008	16:38	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
WEST BABYLON	SUFFOLK CO.	NY	8/14/2008	16:43	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
NORTH LINDENHURST	SUFFOLK CO.	NY	8/14/2008	16:45	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
LOULEYVILLE	SUFFOLK CO.	NY	8/14/2008	16:50	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
SMITHTOWN	SUFFOLK CO.	NY	8/15/2008	14:00	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
MILLER PLACE	SUFFOLK CO.	NY	8/15/2008	14:10	EST-5	Hail	1.75 in.	0	0	0.50K	0.00K
HAMPTON PARK	SUFFOLK CO.	NY	8/25/2008	17:05	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	12/31/2008	13:00	EST-5	High Wind	37 kts. MS	0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK CO.	NY	2/12/2009	8:00	EST-5	High Wind	50 kts. MG	0	0	0.00K	0.00K
STONY BROOK	SUFFOLK CO.	NY	6/26/2009	17:27	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
CENTEREACH	SUFFOLK CO.	NY	6/26/2009	17:30	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
EAST SETAUKET	SUFFOLK CO.	NY	6/26/2009	17:32	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	6/26/2009	17:34	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
EAST SETAUKET	SUFFOLK CO.	NY	6/26/2009	17:41	EST-5	Hail	1.50 in.	0	0	0.00K	0.00K
BEIXEDON ESTATES	SUFFOLK CO.	NY	6/26/2009	18:05	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.50K	0.00K
OLD FIELD	SUFFOLK CO.	NY	7/7/2009	12:50	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
DERING HARBOUR	SUFFOLK CO.	NY	7/7/2009	14:07	EST-5	Thunderstorm Wind	60 kts. EG	0	0	0.50K	0.00K
AMITYVILLE ARPT	SUFFOLK CO.	NY	7/7/2009	15:00	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
SHORE ACRES	SUFFOLK CO.	NY	7/31/2009	16:02	EST-5	Thunderstorm Wind	61 kts. EG	0	0	1.50K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Tyma	Mag	Dth	Inj	PrD	CrD
DIX HILLS	SUFFOLK CO.	NY	9/28/2009	18:05	EST-5	Type Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NY	10/7/2009	11:44	EST-5	Strong Wind	45 kts. EG	0	0	6.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	11/28/2009	9:30	EST-5	Strong Wind	38 kts. MG	0	0	5.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	12/29/2009	7:00	EST-5	High Wind	53 kts. MG	0	0	5.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	1/25/2010	10:00	EST-5	Strong Wind	45 kts. EG	0	0	50.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	1/25/2010	11:00	EST-5	Strong Wind	45 kts. EG	0	0	30.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	1/25/2010	12:00	EST-5	Strong Wind	45 kts. EG	0	0	30.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	1/25/2010	13:00	EST-5	High Wind	52 kts. MG	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	3/13/2010	16:50	EST-5	High Wind	52 kts. EG	1	0	100.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	3/13/2010	21:20	EST-5	High Wind	59 kts. EG	0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	3/13/2010	21:56	EST-5	High Wind	63 kts. EG	0	0	0.00K	0.00K
SHOREHAM	SUFFOLK CO.	NY	5/26/2010	23:16	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
SHOREHAM	SUFFOLK CO.	NY	5/26/2010	23:18	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
SHOREHAM	SUFFOLK CO.	NY	5/26/2010	23:21	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	5/27/2010	1:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.90K	0.00K
HOLBROOK	SUFFOLK CO.	NY	6/22/2010	22:20	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.50K	0.00K
BEIXEDON ESTATES	SUFFOLK CO.	NY	6/24/2010	13:57	EST-5	Thunderstorm Wind	61 kts. EG	0	0	2.00K	0.00K
LINDENHURST	SUFFOLK CO.	NY	6/24/2010	14:08	EST-5	Thunderstorm Wind	52 kts. EG	0	1	0.50K	0.00K
WEST BABYLON	SUFFOLK CO.	NY	6/24/2010	14:10	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
BABYLON	SUFFOLK CO.	NY	6/24/2010	14:21	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
BABYLON	SUFFOLK CO.	NY	6/24/2010	14:44	EST-5	Thunderstorm Wind	70 kts. EG	0	0	7.50K	0.00K
MIDDLEVILLE	SUFFOLK CO.	NY	7/19/2010	18:05	EST-5	Thunderstorm Wind	61 kts. EG	0	0	5.00K	0.00K
UPTON	SUFFOLK CO.	NY	7/19/2010	19:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
YAPHANK	SUFFOLK CO.	NY	7/19/2010	19:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Type	Mag	Dth	Ini	PrD	CrD
MILLER PLACE	SUFFOLK CO.	NY	7/19/2010	19:20	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.75K	0.00K
JAMESPORT	SUFFOLK CO.	NY	7/21/2010	13:02	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	7/21/2010	17:05	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
SPRINGS	SUFFOLK CO.	NY	7/21/2010	17:30	EST-5	Thunderstorm Wind	70 kts. EG	0	0	25.00K	0.00K
JAMESPORT	SUFFOLK CO.	NY	7/21/2010	17:55	EST-5	Thunderstorm Wind	61 kts. EG	0	0	7.50K	0.00K
MECOX	SUFFOLK CO.	NY	7/21/2010	18:10	EST-5	Thunderstorm Wind	56 kts. MG	0	0	0.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	7/21/2010	18:30	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
YAPHANK	SUFFOLK CO.	NY	7/21/2010	18:46	EST-5	Thunderstorm Wind	61 kts. EG	0	0	7.50K	0.00K
AMITYVILLE ARPT	SUFFOLK CO.	NY	7/25/2010	14:33	EST-5	Thunderstorm Wind	52 kts. MG	0	0	0.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	7/25/2010	14:35	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
NORTH BABYLON	SUFFOLK CO.	NY	7/25/2010	14:37	EST-5	Thunderstorm Wind	52 kts. EG	0	0	6.00K	0.00K
BABYLON	SUFFOLK CO.	NY	7/25/2010	14:37	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
NORTH BABYLON	SUFFOLK CO.	NY	7/25/2010	14:37	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
BABYLON	SUFFOLK CO.	NY	7/25/2010	14:40	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.50K	0.00K
BAY SHR	SUFFOLK CO.	NY	7/25/2010	14:42	EST-5	Hail	0.88 in.	0	0	0.00K	0.00K
WEST BAY SHR	SUFFOLK CO.	NY	7/25/2010	14:45	EST-5	Thunderstorm Wind	52 kts. EG	0	0	6.00K	0.00K
MASTIC BEACH	SUFFOLK CO.	NY	7/25/2010	15:05	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
EAST HAMPTON	SUFFOLK CO.	NY	9/8/2010	8:55	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MECOX	SUFFOLK CO.	NY	9/8/2010	8:55	EST-5	Thunderstorm Wind	51 kts. MG	0	0	0.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	9/30/2010	17:00	EST-5	Strong Wind	40 kts. EG	0	0	100.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	9/30/2010	17:00	EST-5	Strong Wind	40 kts. EG	0	0	100.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	10/1/2010	4:00	EST-5	Strong Wind	43 kts. MG	0	0	30.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/1/2010	6:00	EST-5	Strong Wind	41 kts. MG	0	0	30.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	10/15/2010	18:00	EST-5	Strong Wind	43 kts. MG	0	0	20.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/15/2010	18:00	EST-5	Strong Wind	43 kts. MG	0	0	20.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	12/1/2010	14:00	EST-5	High Wind	50 kts. EG	0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	2/19/2011	18:00	EST-5	High Wind	54 kts. EG	0	0	100.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	2/25/2011	9:00	EST-5	High Wind	51 kts. EG	0	0	100.00K	0.00K
EAST HAMPTON	SUFFOLK CO.	NY	6/1/2011	18:07	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
ISLIP ARPT	SUFFOLK CO.	NY	6/9/2011	17:35	EST-5	Funnel Cloud		0	0	0.00K	0.00K
EAST HUNTINGTON	SUFFOLK CO.	NY	6/17/2011	16:00	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
HAUPPAUGE	SUFFOLK CO.	NY	6/17/2011	17:00	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
CENTRAL ISLIP	SUFFOLK CO.	NY	7/7/2011	16:05	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.50K	0.00K
SOUTHAMPTON	SUFFOLK CO.	NY	7/26/2011	21:00	EST-5	Thunderstorm Wind	61 kts. EG	0	0	5.00K	0.00K
BAITING HOLLOW	SUFFOLK CO.	NY	8/1/2011	18:57	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
CALVERTON	SUFFOLK CO.	NY	8/1/2011	19:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
(FOK)WESTHAMPTON BCH	SUFFOLK CO.	NY	8/1/2011	19:15	EST-5	Thunderstorm Wind	54 kts. MG	0	0	0.00K	0.00K
WESTHAMPTON	SUFFOLK CO.	NY	8/1/2011	19:35	EST-5	Thunderstorm Wind	52 kts. EG	0	0	4.00K	0.00K
CANOE PLACE	SUFFOLK CO.	NY	8/1/2011	19:35	EST-5	Thunderstorm Wind	61 kts. EG	0	0	7.50K	0.00K
ВОНЕМІА	SUFFOLK CO.	NY	8/18/2011	20:23	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SAYVILLE	SUFFOLK CO.	NY	8/18/2011	20:42	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	8/18/2011	20:45	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
NORTH PATCHOGUE	SUFFOLK CO.	NY	8/18/2011	20:46	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
PATCHOGUE	SUFFOLK CO.	NY	8/18/2011	20:47	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.75K	0.00K
BABYLON	SUFFOLK CO.	NY	8/28/2011	3:50	EST-5	Tornado	EF0	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	12/8/2011	0:00	EST-5	High Wind	54 kts. EG	0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	12/8/2011	0:00	EST-5	High Wind	56 kts. MG	0	0	10.00K	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	12/8/2011	0:00	EST-5	High Wind	60 kts. MG	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	12/27/2011	19:00	EST-5	High Wind	51 kts. MG	0	0	20.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	2/25/2012	15:00	EST-5	High Wind	51 kts. MG	0	0	0.00K	0.00K
COMMACK	SUFFOLK CO.	NY	6/3/2012	16:55	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
WEST ISLIP	SUFFOLK CO.	NY	6/3/2012	17:09	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.50K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
ISLIP	SUFFOLK CO.	NY	6/3/2012	17:09	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
RONKONKOMA	SUFFOLK CO.	NY	6/25/2012	16:51	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
CENTRAL ISLIP	SUFFOLK CO.	NY	6/25/2012	16:51	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
NORTH GREAT RIVER	SUFFOLK CO.	NY	7/1/2012	16:58	EST-5	Hail	1.00 in.	0	0	0.00K	0.00K
WEST SAYVILLE	SUFFOLK CO.	NY	7/1/2012	17:08	EST-5	Thunderstorm Wind	61 kts. EG	0	0	7.50K	0.00K
BABYLON	SUFFOLK CO.	NY	7/1/2012	17:11	EST-5	Hail	1.25 in.	0	0	0.00K	0.00K
BAYPORT	SUFFOLK CO.	NY	7/1/2012	17:12	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
NORTH LINDENHURST	SUFFOLK CO.	NY	7/1/2012	17:13	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
BAY SHR	SUFFOLK CO.	NY	7/1/2012	17:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
WEST ISLIP	SUFFOLK CO.	NY	7/1/2012	17:15	EST-5	Hail	0.75 in.	0	0	0.00K	0.00K
CORAM AIRPARK ARPY	SUFFOLK CO.	NY	7/7/2012	20:30	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
WESTHAMPTON	SUFFOLK CO.	NY	7/7/2012	20:35	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MT SINAI	SUFFOLK CO.	NY	7/15/2012	17:50	EST-5	Thunderstorm Wind	52 kts. EG	0	0	3.00K	0.00K
MILLER PLACE	SUFFOLK CO.	NY	7/15/2012	18:00	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.50K	0.00K
MATTITUCK	SUFFOLK CO.	NY	7/24/2012	17:20	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.75K	0.00K
GREAT RIVER	SUFFOLK CO.	NY	8/10/2012	13:06	EST-5	Tornado	EF0	0	0	100.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
(ISP)MC ARTHUR FLD	SUFFOLK CO.	NY	8/10/2012	13:15	EST-5	Thunderstorm Wind	52 kts. EG	0	0	1.00K	0.00K
MELVILLE	SUFFOLK CO.	NY	8/15/2012	11:21	EST-5	Thunderstorm Wind	52 kts. EG	0	0	0.00K	0.00K
LAKE GROVE	SUFFOLK CO.	NY	9/18/2012	21:35	EST-5	Thunderstorm Wind	52 kts. EG	0	0	2.00K	0.00K
EATONS NECK	SUFFOLK CO.	NY	9/28/2012	10:55	EST-5	Thunderstorm Wind	61 kts. EG	0	0	2.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	10/29/2012	13:00	EST-5	High Wind	74 kts. EG	0	0	1.000M	0.00K
SOUTHEAST SUFFOLK (ZONE)	SOUTHEAST SUFFOLK (ZONE)	NY	10/29/2012	15:00	EST-5	High Wind	70 kts. EG	0	0	1.000M	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	10/29/2012	15:00	EST-5	High Wind	83 kts. MG	2	0	1.000M	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	10/29/2012	16:00	EST-5	High Wind	78 kts. MG	1	0	1.000M	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	11/7/2012	13:00	EST-5	High Wind	50 kts. EG	0	0	300.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	11/7/2012	19:00	EST-5	High Wind	50 kts. EG	0	0	100.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	12/26/2012	22:00	EST-5	High Wind	61 kts. MG	0	0	2.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	12/27/2012	0:00	EST-5	High Wind	59 kts. MG	0	0	0.00K	0.00K
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	12/27/2012	0:00	EST-5	High Wind	53 kts. EG	0	0	0.00K	0.00K
Totals:								7	18	7.264M	0.00K

E.11 Severe Winter Storm

Severe winter storm events from 1996 to 2013 are listed in the table below.

Table E-10. Severe Winter Storm Events, 1996-2013

Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
Totals:								1	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/07/1996	16:00	EST	Blizzard		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/03/1996	00:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/16/1996	18:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	03/02/1996	07:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	04/09/1996	15:00	EST	Heavy Snow		0	0	0.00K	0.00K
SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	NY	02/25/1999	10:20	EST	Heavy Snow		0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHWEST SUFFOLK (ZONE)	SOUTHWEST SUFFOLK (ZONE)	NY	02/26/1999	05:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	03/15/1999	03:30	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/25/2000	21:00	EST	Winter Storm		0	0	0.00K	0.00K
NORTHWEST AND NORTHEAST SUFFOLK (ZONE)	NORTHWEST AND NORTHEAST SUFFOLK (ZONE)	NY	02/19/2000	05:00	EST	Winter Storm		1	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/30/2000	08:50	EST	Winter Storm		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/20/2001	21:30	EST	Winter Storm		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/05/2001	19:30	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	03/05/2001	21:00	EST	Winter Storm		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/05/2002	17:00	EST	Heavy Snow		0	0	0.00K	0.00K
NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NY	12/25/2002	21:30	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/07/2003	13:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/17/2003	05:00	EST	Heavy Snow		0	0	0.00K	0.00K
NORTHWEST, SOUTHEAST, AND NORTHEAST SUFFOLK (ZONE)	NORTHWEST, SOUTHEAST, AND NORTHEAST SUFFOLK (ZONE)	NY	03/06/2003	15:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	04/07/2003	16:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/05/2003	19:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/06/2003	13:00	EST	Blizzard		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/15/2004	08:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/28/2004	02:00	EST	Winter Storm		0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	NY	12/27/2004	02:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/22/2005	18:30	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/21/2005	07:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/25/2005	04:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	03/01/2005	07:00	EST	Heavy Snow		0	0	0.00K	0.00K
NORTHWEST SUFFOLK (ZONE)	NORTHWEST SUFFOLK (ZONE)	NY	03/12/2005	08:00	EST	Heavy Snow		0	0	0.00K	0.00K
NORTHEAST AND SOUTHEAST SUFFOLK (ZONE)	NORTHEAST AND SOUTHEAST SUFFOLK (ZONE)	NY	12/06/2005	07:00	EST	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/12/2006	07:00	EST	Heavy Snow		0	0	0.00K	0.00K
SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	NY	03/02/2006	19:00	EST	Winter Storm		0	0	0.00K	0.00K
NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NY	02/22/2008	07:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	03/01/2009	20:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/19/2009	12:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
SOUTHWEST AND NORTHWEST SUFFOLK (ZONE)	SOUTHWEST AND NORTHWEST SUFFOLK (ZONE)	NY	12/19/2009	23:00	EST- 5	Blizzard		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	02/09/2010	22:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NORTHWEST AND SOUTHWEST SUFFOLK (ZONE)	NY	02/25/2010	22:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	SOUTHEAST AND NORTHEAST SUFFOLK (ZONE)	NY	02/26/2010	00:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	12/26/2010	10:00	EST- 5	Blizzard		0	0	0.00K	0.00K
COUNTYWIDE	SUFFOLK COUNTY	NY	01/11/2011	21:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K



Location	County/Zone	St.	Date	Time	T.Z.	Туре	Mag	Dth	Inj	PrD	CrD
COUNTYWIDE	SUFFOLK COUNTY	NY	01/26/2011	08:00	EST- 5	Heavy Snow		0	0	0.00K	0.00K
NORTHEAST SUFFOLK (ZONE)	NORTHEAST SUFFOLK (ZONE)	NY	01/21/2012	04:30	EST- 5	Heavy Snow		0	0	0.00K	0.00K
Totals:								1			



E.12 Shallow Groundwater Flooding

Shallow groundwater flooding hazard areas in Suffolk County include those with chronic (persistent) problems, and those areas that experience problems on a cyclical basis in response to long-term precipitation trends.

In the Lake Ronkonkoma and the Northeast Branch of the Nissequogue River area, impacts from shallow groundwater have occurred cyclically. The H2M study reports that some of the older homes in this area have flooding histories dating back to 1936, with documented events during 1951 and 1952. Since the drought period in the early to mid-1960s, impacts from shallow groundwater have been reported in several general events. As groundwater levels recovered during the late 1960s through the 1970s, the basements of certain homes experienced varying degrees of seepage and certain roadways began flooding periodically. High levels of precipitation in 1978 and 1979 exacerbated the problems, with hundreds of homes and many roadways suffering impacts (H2M – Vol. 1) In the early 1990s, part of Steuben Road was abandoned after the town could no longer keep up with the repairs required due to the constant flooding (Newsday, March 12, 2007).

At the Branch Brook Elementary School at 15 Ridgely Road in Hauppauge, groundwater has been rising up into the septic system and causing raw sewage to flow into the school. The cost for the Smithtown Central School District to pump the septic tanks daily from January 2007 to August 2007 totaled \$40,511. The School District is planning to rebuild the septic system with an estimated cost of \$589,785.

E.13 Wildfire

Wildfire events from 1800 to 2007 are listed in the table below.



Table E-11. Severe Winter Storm Events, 1800 to 2007

	Date of		
Event Location	Main Event(s)	Data Source	General Description
Central Islip	1839	Central Pine Barren Fire Management Plan, 1999	Two great fires in the Central Islip – Farmingdale area (Tredwell 1912).
Suffolk County (not specified)	1845	Central Pine Barren Fire Management Plan, 1999	A year after the main line of the railroad was completed. "the extensive and awfully destructive fires, which, in the past season have swept over immense tracts of land In several places, the entire forest for 8 or 10 miles in length, and from 2 to 4 miles in breadth, have been completely swept over by the devouring element, which besides destroying every vestige of vegetation, consumed thousands of cords of wood that had been cut and piled" (Prime 1845).
Suffolk County (not specified)	1848	Central Pine Barren Fire Management Plan, 1999	Peck described the central Suffolk railroad right-of-way as being "as dark and black as the ace of spades, as a most destructive fire had run over it in the month of August 1848; had burned for two weeks and burned over about 75 square miles." (Bayles 1873).
Smithtown, Brookhaven, Riverhead, Southampton	1862	Central Pine Barren Fire Management Plan, 1999	A destructive fire originated in Smithtown and swept through Brookhaven into Riverhead and Southampton. This conflagration was "perhaps of greater magnitude and more destructive in its effect than any other These annual fires which usually occur in the spring time, when everything is dry, are most frequently originated by fire from passing trains on the railroads, or by intentional act of vicious persons" (Bayles 1873).
Port Jefferson, Rocky Point Preserve	April 1931	Central Pine Barren Fire Management Plan, 1999	An approximately 15,000 acre fire burned from Port Jefferson Station to Rocky Point Preserve. A newspaper article describes fire as starting on Saturday morning, south of Mt. Sinai and south of Port Jefferson Station, burning in a 6 x 4 mile area.
Brookhaven State Park and National Laboratory	1930's	Central Pine Barren Fire Management Plan, 1999	A greater than 4,000-acre fire burned Brookhaven State Park and the northern portion of Brookhaven National Laboratory.
Suffolk Hills County Park	1944	The Nature Conservancy Eastern Heritage Task Force, 1994	Suffolk Hills County Park fire impacting greater than 500 acres
Calverton National Cemetery	1938 to 1947?	The Nature Conservancy Eastern Heritage Task Force, 1994	Calverton National Cemetery fire impacting greater than 1,000 acres
Sears Bellow County Park	July 1964	Central Pine Barren Fire Management Plan, 1999	An approximately 6,000-acre fire burned the Sears Bellows County Park area.
South Yaphank	1960's	Central Pine Barren Fire Management Plan, 1999	A greater than 5,000-acre fire burned in South Yaphank, mostly north of Horse Block Road and south of the LI Expressway.
Peasys	May 25, 1981	The Nature Conservancy Eastern	Peasys – Grassy Pond near Route 25. greater than 500 acres



	Date of Main		
Event Location	Event(s)	Data Source	General Description
		Heritage Task Force, 1994	
Manorville Moraine	April 30 and May 1, 1983	The Nature Conservancy Eastern Heritage Task Force, 1994	Manorville Morian, greater than 500 acres
Brookhaven State Park	Oct. 28, 1985	The Nature Conservancy Eastern Heritage Task Force, 1994	Brookhaven State Park, greater than 625 acres
Manorville Moraine	April 20, 1989	The Nature Conservancy Eastern Heritage Task Force, 1994	Manorville Moraine, northwest of Bald Hill, greater than 542 acres
Brookhaven	April 21, 1989	The Nature Conservancy Eastern Heritage Task Force, 1994	Brookhaven, Otis Pike Property, greater than 542 acres
Suffolk County	Aug. 1995	New York State Multi- Hazard Mitigation Plan (September, 2004)	FEMA FSA-2115 (1995) with \$5 M eligible damages
Pine Barrens – Westhampton, Rocky Point, Calverton, and Medford	Aug. – Sept. 1995	West Hampton Fire Department	Aug. 24 – Sept. 5, 1995 – Pine Barren Fires: In August and September 1995, devastating fires raged across Long Island's pine barrens for 13 days. Extreme drought conditions and gusting winds of up to 20 miles per hour (mph) contributed to the ferocity of the blaze. More than 6,800 acres of forest were charred in Westhampton, Rocky Point, Calverton, and Medford, with a state of emergency in effect from August 24 until September 5. Nearly every fire department in Nassau and Suffolk Counties responded, along with several New York City departments and 32 federal, state, and local government agencies. Forty-nine firefighters were injured, none seriously. One house and five fire trucks were destroyed, and nine other houses plus the Westhampton train station were damaged. On October 1, an estimated 32,000 spectators turned out to thank firefighters with a Heroes Parade in Westhampton. August 24, 1995 Fires (part of Pine Barren Fire incident) – "Sunrise Fires" On Aug. 24, 1995, a tanker from the New York National Guard's Air Rescue Group stationed at Gabreski Airport in Westhampton Beach provided assistance to the Westhampton Beach (NY) Fire Department as it
			battled the epic Sunrise Fire, a monstrous blaze that made international news as it tore through several WUI areas of Long Island. Every volunteer fire department on Long Island as well as paid departments and additional crews from New Jersey, FDNY and Connecticut joined forces to control the wall of flames that leapt over the four-lane Sunrise Highway—and the trucks trying to stop it—



Event Location	Date of Main Event(s)	Data Source	General Description
			and charged toward a housing development. Experts predicted that all of Westhampton Beach could be lost; the flames threatened hundreds of homes and thousands of people, and ultimately burned more than 5,000 acres on both sides of Sunrise Highway. Firefighters brought the fire under control after a week-long battle, but not a single structure was completely destroyed, and there were no fatalities or serious injuries. It became the largest wildfire on Long Island in recent history. Is the all the same "event" – ?
Suffolk County (not specified)	Aug. 1995	NYS DEC http://www.dec.state. Ny.us/website/reg1/ smallashes.pdf	The summer of 1995 was Long Island's driest in 71 years. Pine and scrub oak forests in central Suffolk County were tinder dry and ready to explode into flame. On August 21, an 1,800-acre fire, believed to be caused by human activity, started at DEC's Rocky Point Natural Resources Management Area. Three days later, the Sunrise Fire began. With flames from 50-to 200-feet high, it threw burning embers 400 feet across Sunrise Highway, ultimately burning 3,200 acres. By August 27, both fires were extinguished. Firefighters from virtually every fire department on Long Island, along with county, state and federal personnel, responded to the call. In the end, this force of 2,500 strong saved more than 150 structures in the path of the Sunrise Fire. More than 2,500 people responded to the 1995 fires on Long Island, including 2,000 firefighters from 192 fire and ambulance companies all across Long Island, New York City and Connecticut. Thirty-eight DEC forest rangers provided on-ground wildland firefighting expertise and aviation support for helicopter bucket drops. Two hundred members of the U.S. Forest Service's "hotshot" crews and fire management staff came. Pilots from the U.S. Military Academy at West Point and the New York Army National Guard also fought the blaze. Today, you can still see the tree skeletons from the fires of 1995, but the rapidly growing new vegetation is creating healthy and rejuvenated pine barrens. Pitch-pine, scrub-oak barrens are among the most endangered natural communities in the country. They support many
			uncommon plants and animals, including the globally rare dwarf pitch pine. Land managers, researchers and conservation organizations are working together to restore and maintain these unique areas using methods such as mowing, thinning and prescribed fire.
Suffolk County (not specified)	Aug. 1995	Gov. Pataki announcement (May 2, 1996) http://www.ny.gov/ governor/press/ older_years/ may2.html	GOVERNOR PATAKI ANNOUNCES AID FOR LONG ISLAND FIREFIGHTERS May 2, 1996 Governor George E. Pataki today announced the payment of more that \$620,000 in Federal Fire Suppression Grants to offset local expenses related to fighting the wildfires on Long Island last August. "All New Yorkers will always take pride and remember their tireless efforts," the Governor said. "I am pleased that FEMA has agreed to ensure that the fire departments and local governments are fully reimbursed for the costs of fighting the wildfire." Suffolk County received \$607,779, with Brookhaven and the Village of Westhampton receiving the most.
			The funding was distributed as follows: Suffolk County: Bayport Fire District, \$13,062; Bellport Fire District, \$5,900; Town of Brookhaven, \$119,358 ; Brookhaven Fire District \$8,741; Burns & Roe Services Corp, \$7,944; Centereach Fire District, \$17,965; and Copiague Fire District, \$4,575. Also, East Brentwood Fire District, \$11,798; East Moriches Fire District \$19,714; East Northport



Event Location	Date of Main Event(s)	Data Source	General Description
			Fire District, \$17,517; Flanders Northampton Volunteer Ambulance Volunteer Ambulance, \$3,701. Also, Greenlawn Fire District, \$8,562; Halesite Fire District, \$13,362; Hauppauge Fire District, \$10,269; Huntington Fire District, \$7,232; Huntington Community Fire Aid Squad, \$2,042; Hunting Manor Fire District, \$2,825; Jamesport Fire District \$5,321; Medford Fire District, \$52,522; Middle Island Fire District, \$32,230; Montauk Fire District, \$5,399; Village of Nissequogue, \$8,356; North Sea Fire District \$18,955. Also, Sag Harbor Village Fire District, \$12,505; Shelter Island Fire Department, \$2,100; Sound Beach Fire District, \$14,714; Southold Fire District, \$7,032; Terryville Fire District, \$11,995; Wading River Fire District, \$13,097; Village of West Hampton Dunes, \$4,474; Village of Westhampton Beach, \$104,683; West Sayville- Oakdale Fire District, \$8,526; Yaphank Fire District \$31,303.
Babylon (TWP) – Deer Park Brush Fire	Apr. 20, 2006	Long Island Exchange Joe Wallace (April 22, 2006) http://www.longisland exchange.com/ articles/society/ suffolkbrushfires 042206.html	A blaze which started in Deer Park brought power outages and a suspension of the Long Island Railroad service in some sections. Dry brush, a lack of rain, and low humidity combined to make conditions fire-friendly. As of the date of this draft plan, no estimate has been made regarding damages or acreages burned. Nine hundred Long Island Power Authority customers lost power thanks to the Deer Park blaze.
Babylon (TWP) – Deer Park Brush Fire	Apr. 20, 2006	Newsday.com – Denise Bonilla "Blazes Leave Its Mark On Suffolk" – Apr. 20, 2006.	A brushfire scorched up to 50 acres in western Suffolk County on April 19, wreaking havoc on the roads and rails, knocking out power to homes, and sending a plume of smoke into the air that could be seen for miles. The fire started in Deer Park and spread rapidly into Brentwood, moving in different directions. It took 43 fire companies from Nassau and Suffolk County to battle the blaze, which raged for more than four hours. Traffic was snarled, service on the Long Island Rail Road (LIRR) was interrupted, and hundreds of residents lost power. The cause of the blaze, which broke out about 1:30 p.m. in the Edgewood Oak Brush Plains Preserve (largest remnant of pitch pine scrub oak on Long Island) near the Deer Park LIRR station and the Heartland Industrial Park, is under investigation. Brentwood Fire Chief Bill Winning noted that dry conditions made the area more susceptible to fire. Although officials considered this event as one fire, it had to be fought on three fronts because of high winds that allowed it to spread quickly. Two buildings in the industrial park were evacuated, he said, but no property was damaged by the fires and workers were eventually allowed to return. The Long Island Power Authority (LIPA), at the request of the Deer Park Fire Department, shut off electricity in the area of the fire to protect both emergency workers on the scene and local residents. As a result, about 900 residents temporarily lost power. Two Brentwood firefighters were injured. A number of highways were closed, including the Sagtikos Parkway, Pine Aire Drive, and Long Island Avenue.
Riverhead (TWP) – Pine Barrens in Riverhead and Brookhaven	Aug. 1995	NYS Governor Office of Regulatory Reform http://www.	Executive Order No. 16: Declaring a Disaster Emergency in Suffolk County and Contiguous Areas: August 21, 1995 – This declaration was made in response to a fire which incinerated more than 5,000 acres of Suffolk County Pine Barrens situated in the Town of Brookhaven and Riverhead.



Event Location	Date of Main Event(s)	Data Source	General Description
		Gorr.state.ny.us/ EO16 fulltext.htm	This fire had resulted in evacuations, injury to response personnel, and economic hardships to affected communities.
Connectquot State Park	Apr. 23, 2007	The Nature Conservancy (Kurtz, 2007)	A wildfire impacted 48 acres on state park land; an area that had been burned several years ago. Several fire companies responded however the departments were able to contain the fire. There were no structural losses.



E.15 Critical Facilities and Community Lifelines

The identification of community lifelines across Suffolk County provides an enhancement to the 2020 HMP. FEMA defines a lifeline as: "providing indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security." Identifying community lifelines will help government officials and stakeholders to prioritize, sequence, and focus response efforts towards maintaining or restoring the most critical services and infrastructure within their respective jurisdiction(s). Identifying potential impacts to lifelines can help to inform the planning process and determining priorities in the event an emergency occur. The following page is FEMA's factsheet that describes lifelines further.



Community Lifelines

National Response Framework Update (Fourth Edition)

A lifeline provides indispensable service that enables the continuous operation of critical business and government functions, and is critical to human health and safety, or economic security.

Why a lifelines construct?

Decision-makers must rapidly determine the scope, complexity, and interdependent impacts of a disaster. Applying the lifelines construct allows decision-makers to:

- Prioritize, sequence, and focus response efforts towards maintaining or restoring the most critical services and infrastructure
- Utilize a common lexicon to facilitate unity of purpose across all stakeholders
- Promote a response that facilitates unity of purpose and better communication amongst the whole community (Federal, state, tribal, territorial, and local governments, and private sector and non-governmental entities)
- Clarify which components of the disaster are complex (multifaceted) and/or complicated (difficult), requiring cross-sector coordination

How will lifelines be used?

- Enhance the ability to gain, maintain, and communicate situational awareness for the whole community in responding to disasters
- Analyze impacts to the various lifelines and develop priority focus areas for each operational period during response
- Identify and communicate complex interdependencies to identify major limiting factors hindering stabilization
- Update the National Response Framework to reflect use of lifelines in response planning

What are the opportunities of lifelines?

- Enable a true unity of effort between government, non-governmental organizations, and the private sector, including infrastructure owners and operators
- Integrate preparedness efforts, existing plans, and identify unmet needs to better anticipate response requirements
- Refine reporting sources and products to enhance situational awareness, best determine capability gaps, and demonstrate progress towards stabilization

Lifelines













