



## APPENDIX E. RISK ASSESSMENT SUPPLEMENT

This appendix contains supporting information for the Risk Assessment (Section 5) as available. It contains excerpts of the previous events and losses as presented in the 2016 HMP, organized by hazard of concern. This information has been compiled into one appendix for ease of reference; however, it has not been updated and is reproduced as documented in the 2016 plan.

In order to create a more streamlined plan, the 2021 HMP was reorganized and condensed into a practical and more readable document for the public with the goal of providing a plan easier to implement for the County and all municipalities to support future risk reduction. The information in this appendix supplements the information provided in Section 4.3 of this plan.

### E.1 CRITICAL FACILITIES AND LIFELINES

The identification of community lifelines across Cape May County provides an enhancement to the 2021 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.




# Homeland Security

## 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



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*"With honor and integrity, we will safeguard the American people, our homeland, and our values."*





## E.2 HISTORY OF HAZARD EVENTS IN THE COUNTY

To supplement the information provided in this plan, events documented in the 2010 HMP and 2016 HMP are included below by hazard of concern. The previous events and losses listed were directly carried over from the 2010 HMP and 2016 HMP and reflects events identified from 1821 to 2016. With many sources reviewed for the purpose of this HMP, loss and impact information for events could vary depending on the source. Therefore, the accuracy of monetary figures discussed is based only on the available information identified during research for this HMP.

### E.2.1 Coastal Erosion Events

Table E-1. Coastal Erosion Events in Cape May County, 1821 to 2016

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 3, 1821	“Great Hurricane of 1821” or “Norfolk and Long Island Hurricane”	N/A	N/A	The hurricane overtopped every beach from Cape May County to western Long Island with a storm surge of about 10 feet.
September 1882	Coastal Storm	N/A	N/A	Railroad tracks and a railroad bridge were washed away across Ludlum’s Thoroughfare in the City of Sea Isle City.
September 19, 1889	Coastal Storm	N/A	N/A	The storm caused significant damage to the Ludlum Beach Lighthouse in the City of Sea Isle City.
February 8, 1896	Coastal Storm	N/A	N/A	The greatest damage in southern New Jersey occurred in the Borough of Cape May Point, where the sea made great inroads on the beach. The storm cost the borough many thousands of dollars.
September 1938	Hurricane	N/A	N/A	Hurricanes in 1938 swept away miles of streets, homes and marinas, reconfiguring barrier islands from Sea Bright to the City of Cape May.
August 1, 1944	Tropical Storm	N/A	N/A	A tropical storm hit Cape May County after passing through the Delmarva Peninsula, causing severe beach erosion and high tides.
September 12-14, 1944	“The Great September Gale”	N/A	N/A	New Jersey had over \$25 M in damages from this event. After battling erosion for years, the Borough of South Cape May was washed away into the sea (and never was rebuilt). In the City of North Wildwood, fishing piers were destroyed, and houses were washed away and in the Borough of Wildwood Crest, railroad tracks were washed away. Beach drive washed out and was buried to a depth of at least four-feet with sand and debris. More than 100 bungalows washed away on the five-mile strand between Sea Isle City and Strathmere. The City of Cape May suffered nearly \$8 M in damages.



Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
March 6-8 1962	Severe Storm, High Tides, Flooding "Ash Wednesday Storm" or "Great Atlantic Storm of 1962"	FEMA DR-124	Yes	Most damaging northeast storm since the 1888 Blizzard struck New Jersey. Cape May County experienced approximately \$3 M in property damages (1962 USD). The storm eroded hundreds of feet of beachfront throughout the County.
September 27, 1985	Remnants of Hurricane Gloria	N/A	N/A	This storm resulted in a Disaster Declaration (DR-749) for multiple counties in New Jersey; however, Cape May County was not included in this declaration. The Lower Cape Meadows, home to the Migratory Bird Refuge at Cape May Point State Park, near the Lighthouse, were inundated with salt water when Hurricane Gloria hit in 1985 and broke dunes. Many other locations throughout the County suffered severe erosion.
October 30-31, 1991	Coastal Storm ("The Perfect Storm" or "1991 Halloween Nor'Easter")	N/A	N/A	The October 1991 "Halloween Storm" produced an extensive scarp taking about half the width of the dune system in Stone Harbor. At 20 <sup>th</sup> Street in the City of Ocean City, the high tide from the storm caused over \$4 M in damages to the boardwalk. The storm caused an extensive scarp in Stone Harbor (90 <sup>th</sup> Street) taking about half the width of the dune system. Cape May County experienced between \$1.7 M and \$4 M in property damages.
December 11-13, 1992 (FEMA DR-973)	Coastal Storm, High Tides, Heavy Rain, Flooding ("Great Nor'Easter of 1992")	N/A	N/A	Cape May County suffered an estimated \$8.9 M in private property losses and \$7.9 M in public property losses. Avalon experienced \$1.9 M in beach losses. 30-percent of a USACE beach replenishment project was destroyed in the City of Ocean City. Twelve blocks of sand dunes were destroyed in the City of Sea Isle City. Most dunes were washed away in the Township of Upper. Major dune replacement was needed along Delaware Bay in the Township of Middle.
August 20-21, 1997	Flood	N/A	N/A	Some beach erosion did occur in Atlantic City and the City of Cape May. The erosion was bad enough to totally remove the sand and expose the large rocks that were covered by the previous beach replenishment project in the City of Cape May.
October 19, 1997	Coastal Flood	N/A	N/A	Several streets in the City of North Wildwood were closed because of the tidal flooding. The persistent northeast flow for a couple of days also caused rough surf and some beach erosion.
November 7, 1997	Coastal Flooding	N/A	N/A	In the City of Sea Isle City, severe erosion occurred from 89 <sup>th</sup> through 93 <sup>rd</sup> Streets and the ocean came within 15 feet of the Tiburon Shores Condominiums. The surf removed dunes and steps in that area.
November 14, 1997	Coastal Flooding	N/A	N/A	In the City of Sea Isle City, about 290,000 cubic yards of beach was lost due to erosion, nearly a fourth of this occurred in the south end beaches from 89 <sup>th</sup> Street to the Townsend's Inlet Bridge. Seventy truckloads of fill brought in after the previous week's



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				Nor'Easter were all washed away. Water came within about five feet of the Tiburon Shores Condominiums and wood pylons became exposed. Beach damage was described as "considerable" at the Cape May Point Beach.
January 28, 1998	Coastal Flood	N/A	N/A	Preliminary damage estimates were \$15 M, with most of that damage occurring in Cape May County. The storm resulted in severe erosion, damaged or washed out bridges and roadways, evacuations and many power outages.
February 4-5, 1998	Coastal Storm (Nor'Easter)	FEMA DR-1206	Yes	Cape May County experienced between \$3.6 M and \$4.2 M in damages. In Strathmere (Township of Upper), the pounding surf rendered five homes "unsafe". In the City of Sea Isle City, the north end dunes were breached; there were no dunes at all left between 1 <sup>st</sup> and 12 <sup>th</sup> Streets. At the Jersey shore, beach erosion left ten-foot cliffs in the Borough of Avalon. At Cape May Point, severe beach erosion was reported
August 30, 1999	Coastal Flooding / Erosion	N/A	N/A	The pounding surf caused erosion throughout the State, especially in Cape May County. Hardest hit was the Borough of Avalon experiencing approximately \$700 K in losses when nearly 100,000 cubic yards of sand was lost between 9 <sup>th</sup> and 16 <sup>th</sup> Streets. The beach s within the Borough Cape May Point lost about 1 foot of sand depth.
September 16, 1999	Hurricane Floyd	FEMA EM-3148	Yes	Minor beach erosion and back bay flooding were reported in Cape May County
January 25, 2000	Coastal Flooding	N/A	N/A	In Strathmere (Township of Upper), the ocean met the bay as the oceanfront dunes collapsed.
March 5, 2001	Coastal Flooding	N/A	N/A	In Cape May County, severe erosion was reported in the City of North Wildwood. Fifty feet of beach was lost on 3 <sup>rd</sup> and 4 <sup>th</sup> Avenues and erosion extended south to 13 <sup>th</sup> Avenue. Several dunes were destroyed. Significant erosion also occurred on the 2 <sup>nd</sup> Avenue Beach on Hereford Inlet.
September 29, 2001	Coastal Flooding	N/A	N/A	Dunes were destroyed in the Borough of Avalon as waves crashed onto the decks and porches of a few homes.
February 17-18, 2003	Coastal Storm / Blizzard	N/A	N/A	In Cape May County, the City of Ocean City experienced a six-to-eight foot vertical cut in the beach and Stone Harbor lost approximately 2-to-3 feet of vertical sand along the entire beach. The Borough of Stone Harbor also lost approximately 13,000 feet of sand fence that appears to have been washed away. In addition, approximately two-thirds of the sand placed along the Borough of Stone Harbor beaches, as part of a state and federal beach replenishment project, were carried offshore. Dunes were eroded in the Borough of Cape May Point.
September 6-19, 2003	Remnants of Tropical Storm Isabel	N/A	N/A	Tropical Storm Isabel produced a storm surge along the New Jersey coastline of up to 6.5 feet in the City of Cape May. The City of Wildwood, along the southeast coast, reported 1.3 inches of rain. The storm produced slightly above normal tides and rough



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				surf along the Jersey shore, killing one surfer off of the Borough of Wildwood Crest. In the City of Ocean City and the Borough of Avalon, waves eroded beaches by up to four feet. Sea Spray Avenue in the City of Ocean City suffered moderate erosion on 14 <sup>th</sup> Street. Whale Beach experienced locally severe erosion along their geotubes. The Borough of Avalon suffered moderate erosion from 8 <sup>th</sup> Street to 14 <sup>th</sup> Street. The Borough of Stone Harbor suffered moderate erosion from 106 <sup>th</sup> Street to 123 <sup>rd</sup> Street. The City of North Wildwood suffered moderate erosion at 9 <sup>th</sup> Avenue.
October 21, 2004	Heavy/High Surf	N/A	N/A	In Cape May County, erosion averaged between one and two feet in most places and sloped up to 150 feet wide. Higher vertical cuts occurred in the City of North Wildwood, City of Ocean City and the Borough of Avalon. In the City of Ocean City, vertical cuts reached five to six feet by 25 feet wide from Surf Street south to 12 <sup>th</sup> Street. In the Borough of Avalon, the vertical cut reached between three and four feet from 9 <sup>th</sup> Street to the Fishing Pier. Damage to the dune system occurred between 12 <sup>th</sup> and 14 <sup>th</sup> Streets. In the City of North Wildwood, there was a complete loss of 300 feet of dunes and the vertical erosion reached up to five feet. In the City of Cape May, over washes occurred onto Wilmington Avenue.
February 28, 2005	Heavy/High Surf	N/A	N/A	In Cape May County, the City of Ocean City was hit the hardest with three to four foot vertical cuts from the fishing to the amusement pier and an eight to ten foot cut from 8 <sup>th</sup> Street to Seaspray Avenue with dune fencing down in some areas. Elsewhere in the county, vertical cuts averaged one to three feet. The City of Sea Isle City reported loss of dune fencing and exposed rocks.
October 12, 2005	Heavy/High Surf	N/A	N/A	The onshore flow and large wave action caused moderate beach erosion along the shore. Cape May County faired the best of the ocean counties with vertical cuts that averaged between one and four feet. The worst reported erosion was in Longport, the City of Ocean City, Strathmere (Township of Upper) and the Borough of Avalon.
October 24, 2005	Remnants of Hurricane Wilma	N/A	N/A	In Cape May County, the vertical cuts were two to four feet, except up to six feet at Whale Beach (City of Ocean City) (where the geotubes were exposed) and at Cape May Point State Park. Significant dune damage was reported in the City of North Wildwood and the outfall pipe at 13 <sup>th</sup> Street in the Borough of Avalon was damaged.
February 12, 2006	Coastal Flooding	N/A	N/A	Cape May County reported minor to moderate coastal flooding, with some damage to dunes. Beach erosion and street flooding was reported in throughout the county. In the Borough of Avalon, a coastal monitoring station was reported to be damaged by the storm with a vertical cut to the beaches of two to three feet high by 25 to 50 feet wide. Meanwhile, the rest of the coastal beaches suffered a one to four foot high cut by 25 to 50 feet wide, with some beaches experiencing cuts of some 100 to 150 feet wide. Whale Beach (City of Ocean City) experienced exposure of the geotubes and minor structural damage was reported in the City of North Wildwood. Cape May County experienced approximately \$225 K in property damages.



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September 1, 2006	Remnants of Hurricane Ernesto	N/A	N/A	Atlantic-facing beaches sustained severe erosion with localized damage to dune systems in Cape May, Ocean and Atlantic Counties. In Cape May County, the City of Ocean City had vertical cuts that reached six feet with severe damage to their dunes. In Strathmere (Township of Upper) and the City of Sea Isle City, moderate dune damage was reported. The Geotubes were exposed at Whale Beach (City of Ocean City). Vertical cuts elsewhere in Cape May County averaged two to five feet, but widths reached up to 150 feet in the City of Wildwood and the Borough of Wildwood Crest.
November 22, 2006	Nor'Easter	N/A	N/A	In the City of Ocean City, a 10 to 18 foot vertical by 10 to 20 foot horizontal cut to the dune system was reported between East Atlantic and Sea Spray. Vertical cuts of four feet by eight feet were reported throughout its coast. In the City of Sea Isle City, an eight foot by 10 foot vertical by 10 foot horizontal cut occurred. In the Boroughs of Avalon and Stone Harbor, four to eight foot vertical cuts occurred. Dune fencing was damaged in the Borough of Stone Harbor. Elsewhere in the county, vertical cuts averaged one to three feet.
April 14-17, 2007	Severe Storms, Inland and Coastal Flood (Nor'Easter)	N/A	N/A	This storm resulted in a Disaster Declaration (DR-1694) for multiple New Jersey State counties; however, it did not include Cape May County. The pounding surf caused the geotubes to become exposed in Strathmere (Township of Upper). Most of the vertical cuts were one to three feet, except for a small section in the City of Cape May where the vertical cut to the beaches reached six feet.
November 3, 2007	Remnants of Hurricane Noel	N/A	N/A	Remnants of Hurricane Noel caused flooding and beach erosion throughout Cape May County. Vertical cuts averaged from one to four feet. In the City of Ocean City, the Delancy Street outfall pipe was in disrepair. In Strathmere, sand fencing was damaged. Off Sea View Avenue, a 10 foot vertical cliff was carved and a residential bulkhead was exposed. In the Borough of Avalon, from 9 <sup>th</sup> through 20 <sup>th</sup> Streets, four foot vertical cuts to the top of the bulkhead caused rock revetment and outfall to be exposed.
December 15, 2007	High Surf	N/A	N/A	In Cape May County, minor erosion (one to two foot vertical cuts) were reported around the City of Cape May and on the Delaware Bay side of the county.
May 12-13, 2008	Coastal Flood (Nor'Easter)	N/A	N/A	Beach erosion was reported throughout the County.
September 6, 2008	Remnants of Tropical Storm Hanna (Storm Surge/High Tide)	N/A	N/A	Three hundred truckloads of sand were dumped in Strathmere (Township of Upper) to help combat some dune erosion.



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September 25, 2008	High Surf	N/A	N/A	In Cape May County, dunes were cut from Strathmere south (Township of Upper) through the City of North Wildwood. In Ocean City, an outfall and jetty were exposed. In Strathmere, 500 cubic yards were missing from the corner of one dune. One backyard bulkhead collapsed. From Winthrop Avenue to Williams Avenue, a four to five cut was made in a dune. In the Borough of Avalon, dune cuts as high as six feet and as wide as 12 feet were reported at the north end of the borough. In the Borough of Stone Harbor, dune cuts reached three feet high and four feet wide toward the south end of the borough. In the City of North Wildwood, an inland beach dune had a cut that was four feet high and 3 feet wide.
October 20-21, 2008	Coastal Storm	N/A	N/A	High tides caused increased erosion on Corson's Inlet State Park in northern Strathmere (Township of Upper).
November 12-13, 2009	Nor'Easter (Remnants of Tropical Storm Ida)	FEMA DR-1867	Yes	FEMA declared a major disaster for Atlantic and Cape May Counties in New Jersey after the area was struck by severe storms and flooding associated with Tropical Depression Ida and a Nor'Easter. Damage estimates for a few coastal towns of New Jersey reached nearly \$100 million. Cape May County declared a state of emergency. Wind gusts reached up to 50 mph along the southern New Jersey coast. The Township of Lower had 50 consecutive hours of sustained wind over 39 mph with gusts reaching approximately 57 mph. Rainfall totals for Cape May County ranged between 1.70 inches and 2.69 inches. Peak wind gusts in the County ranged between 35 and 57 mph. Severe coastal erosion occurred in some areas, with dunes dropping from 18 feet to 25 feet. Some beaches lost 150 to 400 feet of sand. In the City of Ocean City, the surf washed away a 10-foot high dune and the beach in front of the dune.
August 21-24, 2009	Hurricane Bill	N/A	N/A	Hurricane Bill passed well east of the mid-Atlantic coast and brought rough surf, moderate to severe erosion, and strong rip currents. Waves reached up to 10 feet along the coast and led to numerous water rescues, bathing restrictions and a few injuries. The pounding surf caused beach erosion and the worst was reported in Cape May County. In Ocean City, near First Street, the erosion was severe as the geotubes were exposed on Waverly Beach. A wash over occurred at North Street where the slope reached five feet. In Avalon, vertical cuts reached three to five feet on the north side of the Borough. In Cape May City, a three to five foot cut in the dune occurred near Second Avenue. Other municipalities in the County reported vertical cuts that averaged one to two feet.
September 10-11, 2009	Heavy Rains and Flooding	N/A	N/A	A low pressure system moved into the northeast toward Delaware and New Jersey. It brought tidal flooding, beach erosion and wave action and had the highest impact on coastal areas. Peak wind gusts reached between 40 and 60 mph across the eastern parts of New Jersey with the highest gusts in Atlantic County. The combination of the persistent winds and heavy rain caused downed trees across the region. The largest effect along the shore was the wave action which led to erosion from the pounding surf.





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				<p>In Cape May County, there was heavy rain and strong winds that caused flash flooding and erosion. Most vertical cuts averaged one to two feet, but reached as high as four feet in Ocean City, six feet in Sea Isle City, and seven feet in Avalon. In Ocean City, geotubes were exposed at Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the 88th Street groin. The Townsend Inlet Bridge was closed between Sea Isle City and Avalon. In Avalon itself, the vertical cuts reached 7 feet between 10th and 24th Streets. In Stone Harbor, dune fencing was lost and in North Wildwood, a remnant dune in the inlet disappeared. Peak wind gusts in the County ranged from 48 mph in Ocean City to 51 mph in Cape May. Minor tidal flooding occurred with the early morning high tide as it reached 6.96 feet above MLLW (minor tidal flooding starts at 6.7 feet above MLLW). Rainfall totals ranged from 3.71 inches in Ocean City to 4.58 inches in Eldora. Flash flooding was reported in Cape May City, Wildwood, Wildwood Crest, Villas (Lower Township), Rio Grande (Upper Township) and Ocean City. The County had approximately \$20,000 in property damage from this event.</p>
October 15-19, 2009	Coastal Flood and High Surf	N/A	N/A	<p>A pair of Nor'Easters impacted the east coast. The first moved from the Tennessee Valley to the northern North Carolina coastal waters to the southeast of Cape Cod, Massachusetts. The second Nor'Easter formed off the Delmarva coastal waters and moved to the northeast and passed through Nova Scotia. These storms brought tidal flooding, heavy surf, erosion, and flooding of major roadways.</p> <p>In Cape May County, a state of emergency was declared on the 16th. In Sea Isle City, a school bus had to be rescued from flood waters. The National Guard was deployed to help with evacuations in Avalon, Lower Township, Ocean City, Stone Harbor, West Wildwood, and Wildwood. There were major roadway closures due to tidal flooding including the 9th Street Bridge (State Route 52) to Ocean City, the Townsends Inlet Bridge between Sea Isle City and Avalon and the Georg Reading Bridge (State Route 47) between Middle Township and Wildwood. In Avalon, at the Townsends Inlet Bridge, an overwash of the seawall at Ocean Drive caused 20 feet of road shoulder to collapse on the west side of the roadway. Other road closures were reported in Sea Isle City and Strathmere. Four feet of water accumulated on some roadways in West Wildwood.</p> <p>The highest tides in the County occurred with the morning tide on the 17th. Elsewhere, along the ocean, the highest tides occurred with the morning high tide on the 18th. At the Cape May Ferry Terminal, the tide reached 8.16 feet above MLLW, with moderate tidal flooding starting at 7.7 feet above MLLW. There were vertical cuts averaging one to three feet in the County. In Ocean City, an eight foot by 14 foot cut in the dune occurred from Pennyland Avenue north to the 9th Street Bridge. Geotubes were exposed along Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the south end of the municipality. In Avalon, vertical cuts reached up to 12 feet between 11th and 26th Streets. In Stone Harbor, a six foot by 10 foot dune cut occurred from 100th through 115th Streets. In Cape May, a 10-foot high by six-foot wide due cut occurred</p>



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				for 300 feet at Wilmington Avenue. Minor beach erosion also occurred on the Delaware Bay side of the County.
March 12-13, 2010	Severe Storms and Flooding	DR-1897	Yes	The pounding surf and moderate to locally severe coastal flooding impacted areas along the New Jersey coastline. In Cape May County, vertical cuts averaged two to five feet, with dune cuts reported in Avalon, North Wildwood, and Cape May. Minor flooding occurred in parts of the County. The City of Cape May had one of the highest tides reported at 7.41 feet above mean lower low water. Rainfall totals in the County ranged from 3.22 inches in Wildwood to 4.55 inches in Woodbine. In addition to the heavy rains, there were strong winds that downed trees, limbs and utility poles, causing power outages. Peak wind gusts in the County included 62 mph in Ocean City. There were six injuries associated with this event. The County had approximately \$500,000 in property damage from this event.
August 27-28, 2011	Hurricane Irene	DR-4021	Yes	<p>Hurricane Irene produced torrential downpour rains that resulted in major flooding and a number of record breaking crests on area rivers, tropical storm force wind gusts, one confirmed tornado, and a 3- to 5-foot storm surge that caused moderate to severe tidal flooding with extensive beach erosion. This resulted in thousands of mandatory and voluntary evacuations along the coast and rivers from storm surge and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas that were subsequently impacted by the remnant moisture from Tropical Storm Lee in September. Moderate tidal flooding occurred along the tidal Delaware River and Delaware Bay and minor to moderate flooding occurred farther north along the Delaware River. Moderate to severe tidal flooding occurred along the Atlantic Coast and Raritan Bay. Waves were estimated to reach as high as 12 feet and offshore seas reached 25 feet. The wind and flooding across the state forced the closure of approximately 350 main roadways in the State including sections of I-287, the Garden State Parkway, and the New Jersey Turnpike. There were six direct deaths associated with this storm, all drownings. Governor Christie declared a state of emergency for all of New Jersey.</p> <p>In Cape May County, there were mandatory evacuations throughout the county. Vertical cuts averaged two to four feet. In the City of Cape May, a horizontal dune cut occurred on Poverty Beach. The highest wind gusts during Irene ranged from 53 mph in Wildwood to 75 mph at the Cape May Ferry Terminal (Lower Township). The Cape May Lewes Ferry suspended service for two days. The County also experienced moderate tidal flooding, with a peak tide of 8.55 feet above mean lower low water in the City of Cape May. Rainfall totals in the County ranged from 4.9 inches in Stone Harbor to 8.59 inches in Cedar Springs. The County had approximately \$5.5 million in damages from this event.</p>



Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
October 29, 2012	Hurricane Sandy	DR-4086	Yes	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable. Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>In Cape May County, rainfall totals ranged from 3.53 inches at Dias Creek to 11.91 inches at Wildwood Crest. Peak wind gusts in the County ranged from 60 mph in Ocean City to 81 mph in Dennisville. The maximum water level for the County was in Cape May and measured at 8.91 feet MLLW and a storm surge of 3.51 feet was reported.</p> <p>With regards to erosion, the area between Reeds Beach and Cape May Point (western shoreline of Cape May County) suffered from the backside of Sandy after the storm made landfall on the New Jersey shoreline. The wind direction reversed and came across the storm surge flooded Delaware Bay with four foot waves with very short periods. Due to the high water levels, the waves pounded the dunes and made low-lying areas subject to inundation, wave damage, and loss of some structures. The shoreline of Corson's Inlet State Park, south of development in Ocean City, suffered extensive dune loss during Sandy. The southern shoreline of Ocean City was damaged due to low, narrow dunes.</p> <p>The County had approximately \$175 million in damages from this event. The County and its municipalities received over \$40 million in obligated reimbursements for damage caused by Hurricane Sandy. Additionally, the County received \$1.24 million in HMGP funds for the energy allocation initiative generator projects. The County also received over \$2.3 million for HMGP local projects/county infrastructure projects. Over \$780,000 was received by FEMA elevation grants for nine properties in the County.</p>
January 3, 2014	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought five to nine inches of snow across most of New Jersey and about 10 inches in northern Ocean County and in Monmouth County. This caused hazardous travel conditions. Governor Christie declared a state of emergency in New Jersey. There were numerous school, government and business closures. Warming centers were opened. Overall snow totals ranged from 5.5 inches in Morris and Warren counties to 10.7 inches in Monmouth County. Wind gusts ranged from 40 mph in Monmouth County to 52 mph in Cape May County.</p> <p>In Cape May County, snowfall totals ranged from eight to nine inches. Peak wind gusts of 52 mph was measured in Cape May City. Tidal flooding also impacted Cape May County which left many roadways icy due to the low temperatures that occurred on the</p>



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				3rd. Moderate tidal flooding occurred in the County; high tide reached 7.27 feet above MLLW at Cape May.
December 9, 2014	Nor'Easter and Flooding	N/A	N/A	<p>A strong Nor'Easter brought strong winds and minor to moderate tidal flooding the Upper Delaware Bay and around Raritan Bay. There was moderate tidal flooding in Lower Delaware Bay and Atlantic Coastal New Jersey. The storm also caused minor to moderate beach erosion. Peak wind gusts ranged from 45 to 55 mph and downed trees, limbs and power lines. Tidal flooding from this event impacted all of the coastal counties in New Jersey.</p> <p>In Cape May County, the highest tide was at the Cape May Ferry Terminal and was 7.78 feet above mean lower low water (moderate tidal flooding). Peak wind gusts of 46 mph was recorded at Cape May Harbor. In West Wildwood, the George Redding Bridge (State Route 47) was closed. In Ocean City, tidal flooding reached the doorways of businesses on West Avenue. Schools in the County were closed due to this event.</p>
January 26, 2015	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought heavy snow and minor tidal flooding to parts of New Jersey. Snowfall in northwest New Jersey averaged one to five inches. A state of emergency was declared and a driving ban was enacted. Trains and ferries were operating on a modified schedule. There was minor coastal flooding during the high tide cycle during the predawn hours of the 27th, as well as some beach erosion. Snow began falling in the state during the early morning on the 26th. Precipitation started falling as rain in the southern half of the state before it turned over to snow. Overall snowfall totals across New Jersey ranged from 0.9 inches in Cumberland County to 12 inches in Monmouth County.</p> <p>In addition to snowfall, the storm system caused minor tidal flooding during the early morning high tide cycle on the 27th. The highest tide was reported at Sandy Hook (Monmouth County) which reached 7.17 feet above MLLW. In Cape May County, the highest tide at Cape May Ferry Terminal was 7.05 feet above MLLW (minor tidal flooding threshold is 6.70 feet above MLWW). Other locations in the County experienced tidal flooding as well and included the following: Ocean City (6.12 feet above MLLW), Avalon (6.22 feet above MLLW), Stone Harbor (6.66 feet above MLLW), and Cape May Harbor (6.53 feet above MLLW).</p>
October 2-3, 2015	Impacts from Hurricane Joaquin / Nor'Easter	N/A	N/A	Hurricane Joaquin's path passed over or near parts of the northwestern Bahamas with maximum sustained winds near 130 mph, qualifying it as a Category 4 storm. Even though Joaquin's path was east of Cape May County, the County felt the impacts of this storm as Nor'Easter impacted the State of New Jersey. This event caused periods of heavy rain, strong to high winds, beach erosion, power outages, and minor to moderate flooding. In some areas of the state, there was significant beach erosion. In many locations, waves carried away significant amounts of sand from the beach and dune systems that had been built up after Hurricane Sandy. The hardest hit counties in New



Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>Jersey included Cape May, Ocean, and Monmouth. Governor Christie declared a state of emergency for New Jersey prior to the start of the storm. Rainfall totals in the state ranged from 1.5 to 3.5 inches. Overall, the state had \$32 million in damages. In Cape May County, severe beach erosion was reported in North Wildwood. The storm left five foot or higher cliffs carved out of the dunes along sections of the beach. In Middle Township, a vacant and structurally unsound home was dislodged from its pilings in the Grassy Sound Channel behind North Wildwood on October 2<sup>nd</sup> and it floated into the Intracoastal Waterway before it broke apart and settled into the marsh. In addition to beach erosion, coastal flooding impacted Cape May County as well. Low-lying areas in the Strathmere section of Upper Township and Sea Isle City experienced in flooding. Moderate tidal flooding was reported at the Cape May tide gage – 8.07 feet above MLLW was recorded at 12:42pm on October 2<sup>nd</sup> (moderate tidal flooding starts at 7.7 feet above MLLW). Measured wind gusts in the county included 62 mph in the City of Cape May and 44 mph at the Cape May County Airport. Overall, the County had approximately \$12 million in damages from this event.</p>
October 5, 2015	Strong Winds and Rain	N/A	N/A	<p>There were reports of moderate to severe beach erosion up and down the New Jersey coastline with the worst hit areas in Atlantic and Cape May Counties. On some beaches, the dunes were partially to completely washed away. There were numerous road closures. In Cape May County, a vacant house fell into flood waters after the structure was weakened. Tides reached 8.19 feet in North Wildwood. Wind gusts of 62 mph. The storm carved eight foot high cliffs in the dunes.</p>

Source: FEMA 2016; NOAA-NCEI 2016

Note (1): This table does not represent all events that may have occurred throughout the County.

Note (2): Monetary figures within this table were U.S. Dollar (USD) figures calculated during or within the approximate time of the event. If such an event would occur in the present day, monetary losses would be considerably higher in USDs as a result of increased U.S. Inflation Rates.

- CRC Coastal Resource Center
- DR Federal Disaster Declaration
- EM Federal Emergency Declaration
- FEMA Federal Emergency Management Agency
- HMP Hazard Mitigation Plan
- K Thousand (\$)
- M Million (\$)
- NCDC National Climate Data Center
- NOAA National Oceanic Atmospheric Administration
- NWS National Weather Service
- SHELDUS Spatial Hazard Events and Losses Database for the U.S.



E.2.2 Flood

Table E-2. Flood Incidents in Cape May County, 1821 to 2016

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 3, 1821	“Great Hurricane of 1821” or “Norfolk and Long Island Hurricane”	N/A	N/A	Category 4 storm causing major flooding throughout New Jersey State. The City of Cape May was named “Cape Island” at the time of the storm because a wall of water surged across the peninsula from Delaware Bay to the ocean. The hurricane overtopped every beach from the Cape May County to western Long Island with a storm surge of about 10 feet. Upon making landfall on the City of Cape May, the cyclone produced a five-foot storm surge on the Delaware Bay side of the City. Storm surges of 10 feet were reported along the Atlantic coastline of the County.
September 1882	Coastal Storm	N/A	N/A	Railroad tracks and a railroad bridge were washed away across Ludlum’s Thoroughfare in Sea Isle City.
February 16, 1885	Coastal Storm	N/A	N/A	Considerable loss of property occurred. The center of the City, boardwalk and beach drive were intact, the lower end of the boardwalk was destroyed. Sewell’s Point Drive was ruined and the railroad to that point was washed away. Carlton Hall at the Borough of Cape May Point was severely damaged and almost ripped off its foundation. The tracks to the Jackson Street Station were covered with two feet of water. The Sea Isle and Ocean City railway were rendered impassable by the high seas.
September 19, 1889	Coastal Storm	N/A	N/A	The storm caused significant damage to the Ludlum Beach Lighthouse in the City of Sea Isle City.
February 8, 1896	Coastal Storm	N/A	N/A	The greatest damage in the lower part of the State of New Jersey occurred in the Borough of Cape May Point, where the ocean made great inroads on the beach. The storm cost the Borough many thousands of dollars.
September 29-30, 1896	Hurricane	N/A	N/A	Cape May County lost large sections of its boardwalks, The Brunswick Hotel at the City of Sea Isle City was destroyed
July 2, 1921	Flood	N/A	N/A	In the City of Ocean City, the water inundated 6 <sup>th</sup> through 11 <sup>th</sup> Streets. Cellars were filled and first floors of many stores were covered to a depth of six inches.
September 17-20, 1928	“The Great Okeechobee Hurricane”	N/A	N/A	In the City of Cape May, heavy waves wiped away sections of the boardwalk; shattered windows and many buildings sustained serious structural damage.
September 1938	Hurricane	N/A	N/A	This hurricane swept away miles of streets, homes and marinas. It reconfigured the barrier islands from Sea Bright to the City of Cape May.
September 12-14, 1944	“The Great September Gale”	N/A	N/A	The State of New Jersey suffered over \$25 M in damages from this event. In the former Borough of South Cape May (which no longer exists), floodwaters stretched as far back as Sunset Boulevard and 4 blocks beyond. Any houses left standing were so badly damaged they were left inhabitable. With no properties to tax, the Borough of South Cape May had to declare bankruptcy and became part of Township of Lower. In the City of North Wildwood, fishing piers were destroyed and houses





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				were washed away and in the Borough of Wildwood Crest, railroad tracks were washed away. In the City of Cape May, 40-foot tidal waves were reported; carrying away large sections of the boardwalk and significantly damaging the structure of the Convention Hall. Beach Drive washed out and was buried to a depth of at least four-feet with sand and debris. More than 100 bungalows washed away on the five-mile strand between Sea Isle City and Strathmere. The Borough of Avalon lost a municipal pier and boardwalk. The Borough of Stone Harbor's fishing piers were also destroyed. The City of Ocean City was submerged in over six feet of water; the boardwalk was destroyed and the roof blew off of the Breakers Hotel. The City of Cape May suffered nearly \$8 M in damages and over 300 homes were evacuated. One fatality occurred as a result of a drowning in the City of Sea Isle City.
November 25, 1950	Flood	N/A	N/A	All of what was left of the Borough of South Cape May was destroyed, making the Borough non-existent within the County.
October 20-25, 1961	Tidal Flooding	N/A	N/A	Cape May County experienced approximately \$50 K in property damages.
March 6-8 1962	Severe Storm, High Tide, Flood "Ash Wednesday Storm" or "Great Atlantic Storm of 1962"	FEMA DR-124	Yes	Most damaging northeast storm since the 1888 Blizzard struck New Jersey. The Nor'Easter of 1962 caused more damage than any other single storm in Cape May's history. Cape May County experienced approximately \$3 M in property damages (1962 USD). The Red Cross reported that a total of 1,259 dwellings in Cape May County were destroyed during the storm. The storm also eroded hundreds of feet of beachfront throughout the County.
December 22, 1972	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 8.2 feet.
December 9, 1973	Flood	N/A	N/A	Moderate flooding began in Cape May County with tide heights of 7.7 feet.
December 1-2, 1974	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 7.9 feet.
October 14, 1977	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 8.3 feet.
November 6, 1977	Flood	N/A	N/A	Cape May County experienced approximately \$2.4 M in property damages.
October 25, 1980	Flood	N/A	N/A	Severe flooding began in Cape May County with tide heights of 8.7 feet.
November 15, 1981	Flood	N/A	N/A	Moderate flooding began in Cape May County with tide heights of 7.7 feet.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
March 29, 1984	Flood	N/A	N/A	Cape May County experienced approximately \$500 K in property damages. Moderate flooding was reported in Cape May County with tide heights of 8.1 feet.
September 27, 1985	Remnants of Hurricane Gloria	N/A	N/A	This storm resulted in a Disaster Declaration (DR-749) for multiple counties in New Jersey; however, Cape May County was not included in this declaration. The City of Cape May suffered damage to many buildings, including the Cape Island Baptist Church. The storm created severe floods in Cape May County with tide heights of 8.8 feet. Downed power lines, flooding, wind damage, and miscellaneous debris was spread throughout the County.
January 2, 1987	Tidal Flood	N/A	N/A	Cape May County experienced approximately \$63 K in property damages. Moderate flooding was reported in Cape May County with tide heights of 7.9 feet.
October 30-31, 1991	Coastal Storm ("The Perfect Storm" or "1991 Halloween Nor'Easter")	N/A	N/A	New Jersey had over \$90 M in damages from this event. Cape May County experienced approximately \$1.7 M in property damages. Moderate flooding was reported in Cape May County with tide heights of 8.2 feet.
November 10, 1991	Tidal Flood	N/A	N/A	Cape May County experienced approximately \$167 K in property damages.
January 4, 1992	Tidal Flood	FEMA DR-936	Yes	Limited information available for this disaster in State of New Jersey. New Jersey had \$4.85 M in public assistance and \$237 K in hazard mitigation funding. The Hazards and Vulnerability Research Institute indicate that Cape May County experienced approximately \$16 K in property damages. The storm created moderate floods in Cape May County with tide heights of 8.5 feet.
December 11-13, 1992	Coastal Storm/High Tides/Heavy Rain/Flooding ("Great Nor'Easter of 1992")	FEMA DR-973	Yes	Bergen, Essex, Hudson, Somerset, Union, Middlesex, Monmouth, Ocean, Salem, Atlantic, Cumberland, and Cape May Counties were declared disaster areas. Total damages for this event were estimated at \$2 B. New Jersey received \$51 M in public assistance; \$10.5 M in individual assistance; \$2.2 M in hazard mitigation funding; and 238 municipalities were eligible for public assistance. Cape May County suffered an estimated \$8.9 M in private property losses and \$7.9 M in public property losses. The County also suffered severe beach erosion. The storm created moderate floods in Cape May County with tide heights of 8.6 feet.
December 14, 1993	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 7.8 feet.
March 2-3, 1994	Coastal Flood	N/A	N/A	Cape May County experienced approximately \$167 K in property damages. Moderate flooding was reported in Cape May County with tide heights of 8.5 feet.







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
December 20, 1995	Coastal Flood	N/A	N/A	Tidal flooding reached moderate levels in scattered locations in the back bays of Atlantic, Cape May and Ocean Counties.
January 7-8, 1996	Coastal Flood / Erosion	N/A	N/A	Cape May County experienced approximately \$3.6 M in property damages.
March 19, 1996	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 7.9 feet.
December 13, 1996	Flood	N/A	N/A	Moderate flooding began in Cape May County with tide heights of 7.7 feet.
July 24, 1997	Flood	N/A	N/A	In Cape May County, flooding was reported in low lying streets along the back bays from the City of Ocean City to the City of Cape May.
August 20-21, 1997	Flood	N/A	N/A	This storm resulted in a Disaster Declaration (DR-1189) for multiple counties in New Jersey, including Atlantic County; however, Cape May County was not included in this declaration. Gov. Christine Todd Whitman extended a state of emergency to five southern New Jersey counties -- Atlantic, Burlington, Cape May, Cumberland and Ocean -- seeking Federal disaster relief for flood damage caused by back-to-back storms that pounded the area. In Cape May County, street flooding was reported in the Wildwoods. In addition to the flooding, some beach erosion did occur in Atlantic City and the City of Cape May. The erosion was severe enough to totally remove the sand and expose the large rocks that were covered by the previous beach replenishment project in the City of Cape May. Measured storm totals included 9.16 inches in Belleplain and 6.82 inches in the Township of Dennis. The torrential downpours caused back pressure for the streams emptying into the Tuckahoe River and subsequently caused 65 feet of Weatherbee Road (or County Road 548) to wash out in the Township of Upper. Part of County Route 550 in the Township of Dennis was also closed due to flooding. Repairs to Weatherbee Road cost \$485 K.
October 19, 1997	Coastal Flood	N/A	N/A	Several streets in the City of North Wildwood were closed because of the tidal flooding. The persistent northeast flow for a couple of days also caused rough surf and some beach erosion. The U.S. Coast Guard rescued a single male about 3/4 of a mile off the City of Ocean City coast.
November 7, 1997	Coastal Flood	N/A	N/A	In the City of Sea Isle City, severe erosion occurred from 89 <sup>th</sup> through 93 <sup>rd</sup> Streets and the ocean came within 15 feet of the Tiburon Shores Condominiums. The surf removed dunes and steps in that area. The highest tides reported were 6.6 feet above mean low water in Atlantic City, 6.9 feet above mean low water in Sandy Hook and 7.4 feet above mean low water in the City of Cape May. In Cape May County, tidal





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				flooding forced the closure of several blocks in the City of Ocean City and the City of Wildwood.
November 14, 1997	Coastal Storm	N/A	N/A	Cape May County again was hit the hardest by this Nor'Easter. In the City of Sea Isle City, about 290,000 cubic yards of beach was lost due to erosion, nearly a fourth of this occurred in the south end beaches from 89 <sup>th</sup> Street to the Townsend's Inlet Bridge. Seventy truckloads of fill brought in after the previous week's Nor'Easter was all washed away. Water came within about five feet of the Tiburon Shores Condominiums and wood pylons became exposed. Beach damage was described as "considerable" at the Cape May Point Beach. Cars were submerged at high tide in both the City of Ocean City and the City of Cape May. Two roads in the City of Wildwood were closed because of tidal flooding. Tides reached 7.8 feet above mean low water at Sandy Hook, 7.5 feet above mean low water in Atlantic City and 7.9 feet above mean low water in the City of Cape May.
January 28, 1998	Coastal Flood	N/A	N/A	Cape May County was hit especially hard and taken by surprise by a coastal flooding event during this time. The county was rocked with moderate to locally severe flooding, heavy rain and wind gusts in excess of 60 mph. A limited state of emergency was declared in the Borough of Avalon, City of North Wildwood and Borough of Stone Harbor. The storm resulted in severe erosion, damaged or washed out bridges and roadways, evacuations and many power outages. The Wildwoods experienced approximately \$4 M in losses. The City of Sea Isle City lost about 400,000 cubic yards of beach at a cost of \$3 M. Preliminary damage estimates to the counties affected were \$15 M, with most of that damage occurring in Cape May County. The Hazards and Vulnerability Research Institute (SHELDUS) indicates that Cape May County experienced approximately \$3.8 M in property damages (which is less than what is estimated by other sources). Cape May County experienced flood tides of 8.0 feet.
February 4-5, 1998	Coastal Flood	FEMA DR-1206	Yes	Approximate damages in New Jersey were estimated at \$17 M. The State had \$2.2 M in public assistance and \$1.1 M in disaster housing funds. Cape May County experienced between \$3.6 M and \$4.2 M in damages. On the Jersey Shore, beach erosion left ten-foot cliffs in Borough of Avalon. Elsewhere in the County, severe coastal flooding occurred. The peak water level at the City of North Wildwood nearly broke the record set by the devastating hurricane in September 1944. 3,900 customers of the Atlantic Electric Company were without power, most of them in Cape May county. Moderate flooding was reported in Cape May County with tide heights of 8.2 feet.
January 3, 1999	Flood	N/A	N/A	Moderate flooding began in Cape May County with tide heights of 7.7 feet.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
March 15, 1999	Tidal Flooding	N/A	N/A	In Cape May County, tidal flooding was reported along New Jersey Route 47 entering the Wildwoods and the road was closed.
August 30, 1999	Remnants of Hurricane Dennis	N/A	N/A	Remnants of Hurricane Dennis created flooding and severe erosion throughout the southern New Jersey coastline. Swimming restrictions were in place, especially in Cape May County where swimmers were only permitted to go into the water up to their ankles. Eight to ten-foot breakers were reported off the Cape May County Beaches. Street flooding was reported in the City of Sea Isle City. The pounding surf also caused erosion, especially in Cape May County. Hardest hit was the Borough of Avalon experiencing approximately \$700 K in losses when nearly 100,000 cubic yards of sand was lost between 9 <sup>th</sup> and 16 <sup>th</sup> Streets. The beach at the Borough of Cape May Point lost about one-foot of sand depth.
September 16, 1999	Remnants of Hurricane/Tropical Storm Floyd	FEMA EM-3148	Yes	Minor beach erosion and back bay flooding were reported in Cape May County. In Cape May County, rain totals included 3.93 inches in Belleplain, 3.12 inches in the City of Wildwood, 3.06 inches in the City of Cape May and 3.02 inches in the Borough of Stone Harbor. Cape May County experienced approximately \$492 K in property damages.
January 25, 2000	Flooding / Winter Storm	N/A	N/A	The Beesleys Point Bridge connecting Somers Point and Township of Upper (in Cape May County) was under 1.5 feet of water and closed. In Cape May County, flooding forced the closure of the 9 <sup>th</sup> Street Bridge and Causeway in the City of Ocean City. Flooding was also reported along 34 <sup>th</sup> Street. Dozens of motorists were rescued from flooded streets. In Strathmere (Township of Upper), the ocean met the bay as the oceanfront dunes collapsed. In the City of Wildwood, the New Jersey Route 147 and the George Redding Bridges were closed. The worst flooding in the City of Wildwood was on the west (bay) side of the city. The City of North Wildwood declared a state of emergency because of the tidal flooding. The worst flooding was in the Angelsea section of the City of North Wildwood. Three families near Delaware Avenue were evacuated. In the City of Cape May minor tidal flooding was reported at the foot of Yacht and Washington Avenue and Elmira Street. Cape May County experienced flood tides of 7.9 feet.
March 5, 2001	Coastal Flood	N/A	N/A	In Cape May County, severe erosion was reported in the City of North Wildwood. Fifty feet of beach was lost on 3 <sup>rd</sup> and 4 <sup>th</sup> Avenues and erosion extended south to 13 <sup>th</sup> Avenue. Several dunes were destroyed. Significant erosion also occurred on the 2 <sup>nd</sup> Avenue Beach on Hereford Inlet.
July 4, 2001	Small Stream Flood	N/A	N/A	A storm total estimate of around three inches of rain fell within a two hour period in a narrow band across Cape May County from Villas (Township of Lower) northeast through the City of Sea Isle City. Poor drainage flooding occurred with up to three feet of water accumulating in low lying areas.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 29, 2001	Coastal Flood	N/A	N/A	In Cape May County, the worst flooding problems were reported along the north end of the Borough of Avalon (. Some dunes were destroyed as waves crashed onto the decks and porches of a few homes. Lawn furniture and ornaments floated to the back of some properties. The highest reported tides were 7.22 feet above mean lower low water at the Cape May Ferry Terminal.
May 25, 2005	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 7.9 feet.
January 31, 2006	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 7.9 feet.
February 12, 2006	Coastal Flood	N/A	N/A	Cape May County reported minor to moderate coastal flooding, with some damage to dunes. The peak tide height was 6.98 feet above mean lower low water at the Cape May Ferry Terminal. In the City of Wildwood, the Rio Grande Avenue Bridge was closed for two hours during high tide. Beach erosion and street flooding was reported in the City of Cape May. In the Borough of Avalon, a coastal monitoring station was reported to be damaged by the storm with a vertical cut to the beaches of two to three feet high by 25 to 50 feet wide. Meanwhile, the rest of the coastal beaches suffered cuts between one and four feet high and 25 to 50 feet in width, , with some beaches experiencing cuts of some 100 to 150 feet wide. Whale Beach experienced exposure of the geotubes and minor structural damage was reported in the City of North Wildwood. Cape May County experienced approximately \$225 K in property damages.
June 26 – July 10, 2006	Severe Storms and Flood	N/A	N/A	This storm resulted in a Disaster Declaration for multiple New Jersey counties (DR-1653), however, it did not include Cape May County. Six to ten inches of rain fell across southeastern parts of Cumberland County and northwestern parts of Cape May County. This caused considerable roadway and field flooding as well as some stream flooding.
August 27, 2006	Flash Flood	N/A	N/A	In the City of Ocean City, over 100 vehicles were damaged by the flood waters. The worst flooding was reported on the south end of the City of Ocean City and the north end of the City of Sea Isle City. Many yards and lawns were flooded and flooding reached the steps of homes. Actual storm totals included 5.56 inches in Strathmere (Township of Upper) and 3.52 inches in the Community of Seaville (Township of Upper).
September 1, 2006	Remnants of Hurricane Ernesto	N/A	N/A	Remnants of Hurricane Ernesto hit coastal counties to be hard with both tidal and inland flooding and high winds. Atlantic-facing beaches sustained severe erosion with localized damage to dune systems in Cape May, Ocean and Atlantic Counties. Wind gusts in Cape May County reached around 80 mph. The City of Ocean City had vertical cuts that reached six feet with severe damage to their dunes. In Strathmere (Township of Upper) and the City of Sea Isle City, moderate dune





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>damage was reported. The Geotubes were exposed at Whale Beach. Vertical cuts elsewhere in Cape May County averaged between two and five feet, but widths reached up to 150 feet in the City of Wildwood and the Borough of Wildwood Crest.</p> <p>The high winds throughout the County caused a three-story building under construction to collapse in the City of Wildwood. In the City of Ocean City, a couple of boats were pushed into the New Jersey State Route 52 Causeway and closed the bridge for ten hours. In the City of North Wildwood, the roof of the Montego Bay Resort was partially torn away. The hotel was briefly evacuated. Downed trees damaged homes in the City of North Wildwood and Cape May Court House. Waves at the beaches reached 10 to 15 feet. At high tide on the 1st, back bay flooding occurred in the Borough of Avalon and up to three feet of water on the roads in the City of Sea Isle City. Cape May County was the hardest hit in power outages in their service area and was the last area to have power restored.</p>
October 7, 2006	Flood	N/A	N/A	Moderate flooding was reported in Cape May County with tide heights of 8.0 feet.
November 22, 2006	Coastal Storm	N/A	N/A	<p>A Nor'Easter brought heavy rain, strong winds, rough surf and tidal flooding to coastal areas of New Jersey on the 22<sup>nd</sup> and 23<sup>rd</sup> (Thanksgiving Day) and hit Cape May and Atlantic Counties the hardest. Rain totals averaged around two inches in Cape May County. The County took the brunt of the damage. In City of Ocean City, a 10 to 18 foot vertical by 10 to 20 foot horizontal cut to the dune system was reported between East Atlantic and Sea Spray. Vertical cuts of four feet by eight feet were reported throughout its coast. In the City of Sea Isle City, an eight foot by ten foot vertical by ten foot horizontal cut occurred. In the Boroughs of Avalon and Stone Harbor, four to eight foot vertical cuts occurred. Dune fencing was damaged in the Borough of Stone Harbor. Elsewhere in the County, vertical cuts averaged one to three feet. Peak wind gusts reached 57 mph in Cape May Harbor and the City of Ocean City (Cape May County), 51 mph in Barnegat Light (Ocean County), 47 mph in the Borough of Avalon (Cape May County), and 46 mph in Harvey Cedars (Ocean County) and at the Atlantic City Marina (Atlantic County).</p>
April 14-17, 2007	Severe Storms / Inland and Coastal Flood (also identified as a Nor'Easter)	N/A	N/A	<p>This storm resulted in a Disaster Declaration (DR-1694) for multiple New Jersey counties; however, it did not include Cape May County. In Cape May County, the high tide forced the closure of the George Redding Bridge in the City of Wildwood (New Jersey State Route 47) and Ocean Drive (County Route 619) between the City of Ocean City and Strathmere (Township of Upper). Tidal flooding also occurred on the Delaware Bay side with wave damage reported to several homes in Reeds Beach (Township of Middle). The pounding surf also caused the geotubes to become exposed in Strathmere (Township of Upper). Most of the vertical cuts were one to three feet, except for a small section in City of Cape May where the vertical cut to the beaches reached six feet. Cape May County experienced flood tides of 7.8 feet.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
June 13, 2007	Flood	N/A	N/A	Moderate flooding began in Cape May County with tide heights of 7.7 feet.
November 3, 2007	Remnants of Hurricane Noel	N/A	N/A	Remnants of Hurricane Noel caused flooding and beach erosion throughout Cape May County. Vertical cuts averaged from one to four feet. In the City of Ocean City, the Delancy Street outfall pipe was in disrepair. In the City of Strathmere (Township of Upper), sand fencing was damaged. Off Sea View Avenue, a ten-foot vertical cliff was carved and a residential bulkhead was exposed. In the Borough of Avalon, from 9 <sup>th</sup> through 20 <sup>th</sup> Streets, four-foot vertical cuts to the top of the bulkhead caused rock revetment and outfall to be exposed.
May 12-13, 2008	Coastal Storm (Nor'Easter)	N/A	N/A	This Nor'Easter caused very high winds and coastal flooding throughout Cape May County. Numerous roads and bridges were closed in the Cities of West Wildwood, North Wildwood, Ocean City, Sea Isle City and the Borough of Avalon. Over 60,000 residents in Cape May County were without power. Standing floodwaters and debris prevented many crews from reaching parts of Strathmere (Township of Upper) and the City of Sea Isle City. Dozens of cars in the Borough of West Wildwood were destroyed as flood waters quickly rose in the streets. Schools were closed in the City of Wildwood, City of North Wildwood and Borough of West Wildwood due to tidal flooding, and the Route 52 Causeway between the City of Ocean City and Somers Point had to be closed. Beach erosion was reported throughout the County. Estimated losses within the County are unknown. Cape May County experienced flood tides of 8.0 feet.
November 11-14, 2009	Nor'Easter and Remnants of Tropical Storm Ida	(FEMA DR-1867)	Yes	FEMA declared a major disaster for Atlantic and Cape May Counties in New Jersey after the area was struck by severe storms and flooding associated with Tropical Depression Ida and a Nor'Easter. Damage estimates for a few coastal towns of New Jersey reached nearly \$100 million. Cape May County declared a state of emergency. Wind gusts reached up to 50 mph along the southern New Jersey coast. The Township of Lower had 50 consecutive hours of sustained wind over 39 mph with gusts reaching approximately 57 mph. Rainfall totals for Cape May County ranged between 1.70 inches and 2.69 inches. Peak wind gusts in the County ranged between 35 and 57 mph.
September 10-11, 2009	Heavy Rains and Flooding	N/A	N/A	<p>A low pressure system moved into the northeast toward Delaware and New Jersey. It brought tidal flooding, beach erosion and wave action and had the highest impact on coastal areas. Peak wind gusts reached between 40 and 60 mph across the eastern parts of New Jersey with the highest gusts in Atlantic County. The combination of the persistent winds and heavy rain caused downed trees across the region. The largest effect along the shore was the wave action which led to erosion from the pounding surf.</p> <p>In Cape May County, there was heavy rain and strong winds that caused flash flooding and erosion. Most vertical cuts averaged one to two feet, but reached as</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>high as four feet in Ocean City, six feet in Sea Isle City, and seven feet in Avalon. In Ocean City, geotubes were exposed at Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the 88th Street groin. The Townsend Inlet Bridge was closed between Sea Isle City and Avalon. In Avalon itself, the vertical cuts reached 7 feet between 10th and 24th Streets. In Stone Harbor, dune fencing was lost and in North Wildwood, a remnant dune in the inlet disappeared. Peak wind gusts in the County ranged from 48 mph in Ocean City to 51 mph in Cape May. Minor tidal flooding occurred with the early morning high tide as it reached 6.96 feet above MLLW (minor tidal flooding starts at 6.7 feet above MLLW). Rainfall totals ranged from 3.71 inches in Ocean City to 4.58 inches in Eldora. Flash flooding was reported in Cape May City, Wildwood, Wildwood Crest, Villas (Lower Township), Rio Grande (Upper Township) and Ocean City. The County had approximately \$20,000 in property damage from this event.</p>
<p>October 15-19, 2009</p>	<p>Coastal Flood and High Surf (Nor'Easter)</p>	<p>N/A</p>	<p>N/A</p>	<p>A pair of Nor'Easters impacted the east coast. The first moved from the Tennessee Valley to the northern North Carolina coastal waters to the southeast of Cape Cod, Massachusetts. The second Nor'Easter formed off the Delmarva coastal waters and moved to the northeast and passed through Nova Scotia. These storms brought tidal flooding, heavy surf, erosion, and flooding of major roadways.</p> <p>In Cape May County, a state of emergency was declared on the 16th. In Sea Isle City, a school bus had to be rescued from flood waters. The National Guard was deployed to help with evacuations in Avalon, Lower Township, Ocean City, Stone Harbor, West Wildwood, and Wildwood. There were major roadway closures due to tidal flooding including the 9th Street Bridge (State Route 52) to Ocean City, the Townsends Inlet Bridge between Sea Isle City and Avalon and the Georg Reading Bridge (State Route 47) between Middle Township and Wildwood. In Avalon, at the Townsends Inlet Bridge, an overwash of the seawall at Ocean Drive caused 20 feet of road shoulder to collapse on the west side of the roadway. Other road closures were reported in Sea Isle City and Strathmere. Four feet of water accumulated on some roadways in West Wildwood.</p> <p>The highest tides in the County occurred with the morning tide on the 17th. Elsewhere, along the ocean, the highest tides occurred with the morning high tide on the 18th. At the Cape May Ferry Terminal, the tide reached 8.16 feet above MLLW, with moderate tidal flooding starting at 7.7 feet above MLLW. There were vertical cuts averaging one to three feet in the County. In Ocean City, an eight foot by 14 foot cut in the dune occurred from Pennyland Avenue north to the 9th Street Bridge. Geotubes were exposed along Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the south end of the municipality. In Avalon, vertical cuts reached up to 12 feet between 11th and 26th Streets. In Stone Harbor, a six foot by 10 foot dune cut occurred from 100th through 115th Streets. In Cape May, a 10-foot high by six-</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				foot wide due cut occurred for 300 feet at Wilmington Avenue. Minor beach erosion also occurred on the Delaware Bay side of the County.
November 11 – 15, 2009	Severe Storms and Flooding Associated with Tropical Depression Ida and a Nor'Easter	DR-1867	Yes	<p>A powerful Nor'Easter produced wind gusts of nearly 60 mph, widespread moderate tidal flooding, heavy rain, and severe beach erosion along the New Jersey coastline. Several thousand people were without power in the state. A state of emergency was declared for Atlantic, Burlington, Cape May, Cumberland, Ocean and Monmouth Counties.</p> <p>Cape May County reported the worst damage. There were no mandatory evacuations; however, approximately 100 people left their homes in Ocean City and Wildwood. Shelters were opened in Avalon, Lower Township and North Wildwood. During the morning high tide of November 13<sup>th</sup>, nearly every bridge and causeway leading to the barrier islands in the county was closed. The Townsend Inlet Bridge between Sea Isle City and Avalon was closed through the 15<sup>th</sup> after a work barge rammed into it. In Avalon, motorists had to be rescued from their cars due to flooding. Business districts in Avalon, Sea Isle City and Stone Harbor were all flooded. Homes in Sea Isle City had homes that experienced flood damage to the first floor. Significant erosion was reported in Ocean City, Sea Isle City (three dune breaches) and Avalon. Ocean City lost seven million cubic yards of sand. There was no beach left north of 21<sup>st</sup> Street in Avalon. The high winds damaged the roofs of three motels in Wildwood along with one large restaurant sign. Service on the Cape May Lewes Ferry was limited. High tide reached 8.21 feet above mean low water which was the highest tide since February 5, 1998. Peak wind gusts ranged from 51 mph in Wildwood to 57 mph in Cape May City. Rainfall totals ranged from 2.24 inches in Middle Township to 2.69 inches in Sea Isle City. The County had over \$90 million in damages from this event.</p>
March 12-13, 2010	Severe Storms and Flooding	DR-1897	Yes	<p>The pounding surf and moderate to locally severe coastal flooding impacted areas along the New Jersey coastline. In Cape May County, vertical cuts averaged two to five feet, with dune cuts reported in Avalon, North Wildwood, and Cape May. Minor flooding occurred in parts of the County. The City of Cape May had one of the highest tides reported at 7.41 feet above mean lower low water. Rainfall totals in the County ranged from 3.22 inches in Wildwood to 4.55 inches in Woodbine. In addition to the heavy rains, there were strong winds that downed trees, limbs and utility poles, causing power outages. Peak wind gusts in the County included 62 mph in Ocean City. There were six injuries associated with this event. The County had approximately \$500,000 in property damage from this event.</p>
August 27-28, 2011	Hurricane Irene	DR-4021	Yes	<p>Hurricane Irene produced torrential downpour rains that resulted in major flooding and a number of record breaking crests on area rivers, tropical storm force wind gusts, one confirmed tornado, and a 3- to 5-foot storm surge that caused moderate to severe tidal flooding with extensive beach erosion. This resulted in thousands of mandatory and voluntary evacuations along the coast and rivers from storm surge</p>







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas that were subsequently impacted by the remnant moisture from Tropical Storm Lee in September. Moderate tidal flooding occurred along the tidal Delaware River and Delaware Bay and minor to moderate flooding occurred farther north along the Delaware River. Moderate to severe tidal flooding occurred along the Atlantic Coast and Raritan Bay. Waves were estimated to reach as high as 12 feet and offshore seas reached 25 feet. The wind and flooding across the state forced the closure of approximately 350 main roadways in the State including sections of I-287, the Garden State Parkway, and the New Jersey Turnpike. There were six direct deaths associated with this storm, all drownings. Governor Christie declared a state of emergency for all of New Jersey.</p> <p>In Cape May County, there were mandatory evacuations throughout the county. Vertical cuts averaged two to four feet. In the City of Cape May, a horizontal dune cut occurred on Poverty Beach. The highest wind gusts during Irene ranged from 53 mph in Wildwood to 75 mph at the Cape May Ferry Terminal (Lower Township). The Cape May Lewes Ferry suspended service for two days. The County also experienced moderate tidal flooding, with a peak tide of 8.55 feet above mean lower low water in the City of Cape May. Rainfall totals in the County ranged from 4.9 inches in Stone Harbor to 8.59 inches in Cedar Springs. The County had approximately \$5.5 million in damages from this event.</p>
June 4, 2012	Coastal Flood	N/A	N/A	<p>The combination of spring tides associated with the full moon and an onshore flow caused minor to moderate tidal flooding during the first week of June. Moderate tidal flooding occurred along Raritan Bay, coastal New Jersey and Delaware Bay during the evening and overnight high tide cycle on June 4th. Tidal flooding nearly reached moderate levels on tidal sections of the Delaware River as well. In Cape May County, the highest tide occurred during high tide and reached 8.18 feet above MLLW in the City of Cape May. Other tides in the County were recorded and included 9.19 feet above MLLW in Sea Isle City, 6.07 feet above MLLW in Avalon, 7.33 feet above MLLW in Stone Harbor, and 7.59 feet above MLLW in Cape May Harbor.</p>
August 11, 2012	Thunderstorms and Flash Flooding	N/A	N/A	<p>A series of thunderstorms preceding an approaching cold front that coincided nearly exactly with the afternoon high tide produced flash flooding along coastal sections of Atlantic and Cape May Counties. Doppler Radar storm total estimates reached between 2.0 and 2.5 inches right along the immediate shore from Ocean City (Cape May County) northeast into Atlantic City (Atlantic County). Thunderstorms with torrential downpours caused flash flooding in Ocean City, Sea Isle City and Middle and Lower Townships. Widespread roadway flooding was reported, especially in Ocean City. The heavy rain coincided with the afternoon high tide. Event precipitation totals included 1.78 inches in Dennis Township and 1.70 inches in Middle Township.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
August 25-26, 2012	Thunderstorms and Flash Flooding	N/A	N/A	A series of slow moving thunderstorms brought around 5 inches of rain and caused flash flooding in Cape May County. In Avalon and Cape May, vehicles were submerged in flood waters. In North Wildwood and Wildwood Crest, numerous streets were flooded. Some businesses in Wildwood were flooded. Overall, the County had approximately \$150,000 in property damage from this event.
October 29, 2012	Hurricane Sandy	DR-4086	Yes	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were uninhabitable. Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>In Cape May County, rainfall totals ranged from 3.53 inches at Dias Creek to 11.91 inches at Wildwood Crest. Peak wind gusts in the County ranged from 60 mph in Ocean City to 81 mph in Dennisville. The maximum water level for the County was in Cape May and measured at 8.91 feet MLLW and a storm surge of 3.51 feet was reported. The County had approximately \$175 million in damages from this event. The County and its municipalities received over \$40 million in obligated reimbursements for damage caused by Hurricane Sandy. Additionally, the County received \$1.24 million in HMGP funds for the energy allocation initiative generator projects. The County also received over \$2.3 million for HMGP local projects/county infrastructure projects. Over \$780,000 was received by FEMA elevation grants for nine properties in the County.</p>
March 6-7, 2013	Coastal Flooding / Nor'Easter	N/A	N/A	<p>An intense Nor'Easter brought strong to high winds across most of central and southern New Jersey as well as minor to moderate tidal flooding along Raritan Bay, lower Delaware Bay and on the ocean side. Peak wind gusts reached around 70 mph and downed trees, tree limbs and wires and caused some structural damage. About 50,000 homes and businesses lost power. Moderate to minor tidal flooding occurred during the high tide cycles on March 6<sup>th</sup> and 7<sup>th</sup>. Wave action and heavy rain also occurred during this storm. Additionally, the north to northeast winds prevented the back bays from emptying. Overall, the state had approximately \$745,000 in property damage from this event.</p> <p>In Cape May County, rainfall totals included 1.64 inches at Wildwood Crest and 1.46 inches at Middle Township. The highest tide reached 7.54 feet above MLLW in Cape May. High tide in Sea Isle City reached 7.29 feet above MLLW. Tidal flooding closed the George Redding Bridge (State Route 47). Roadway flooding</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>was reported in Ocean City, Avalon and Stone Harbor. In Sea Isle City, vehicles were trapped in flood waters on Landis Avenue. In North Wildwood, Angelsea Drive was closed. Peak wind gusts included 69 mph in the Cities of Ocean City and Cape May, 67 mph in Cape May Harbor and 56 mph in West Cape May. The high winds blew off part of the roof of a condominium in Stone Harbor. The winds also downed poles and wires that resulted in the closure of Stone Harbor Boulevard. Additionally, the winds resulted in the cancellation of four crossing by the Cape May-Lewes Ferry. The County had approximately \$145,000 in property damage from this event.</p>
July 12, 2013	Thunderstorms and Flash Flooding	N/A	N/A	<p>Bands of showers and thunderstorms with heavy rain associated with a low pressure system along the frontal boundary caused some poor drainage flooding in Mercer, Salem and Cumberland Counties and flash flooding in Cape May County. The heaviest rain fell during the afternoon in southern New Jersey and during the late afternoon and early evening in central New Jersey. Event precipitation totals averaged 1 to 2.5 inches in Mercer, Salem and Cumberland Counties as well as the northern half of Cape May County and 2.5 to 5.5 inches in the southern half of Cape May County.</p> <p>Showers and thunderstorms with torrential downpours caused poor drainage flash flooding in the southern third of Cape May County. Event precipitation totals included 5.60 inches in Green Creek, 5.51 inches in Erma, 3.83 inches in Cape May, 3.71 inches in Cape May Harbor and 3.12 inches in Wildwood Crest.</p>
January 3, 2014	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought five to nine inches of snow across most of New Jersey and about 10 inches in northern Ocean County and in Monmouth County. This caused hazardous travel conditions. Governor Christie declared a state of emergency in New Jersey. There were numerous school, government and business closures. Warming centers were opened. Overall snow totals ranged from 5.5 inches in Morris and Warren counties to 10.7 inches in Monmouth County. Wind gusts ranged from 40 mph in Monmouth County to 52 mph in Cape May County.</p> <p>In Cape May County, snowfall totals ranged from eight to nine inches. Peak wind gusts of 52 mph was measured in Cape May City. Tidal flooding also impacted Cape May County which left many roadways icy due to the low temperatures that occurred on the 3rd. Moderate tidal flooding occurred in the County; high tide reached 7.27 feet above MLLW at Cape May.</p>
July 10, 2014	Thunderstorms and Flash Flooding	N/A	N/A	<p>Thunderstorms with heavy rain caused flash flooding along the barrier islands of Cape May County starting on the morning of the 10th. In Ocean City, water was reported as high as 3 feet on some roadways with flooding up the entrance of some homes and businesses. Rainfall totals included 4.48 inches at Beesley's Point, 3.65 inches in Woodbine, 2.44 inches in Upper Township and 2.32 inches in Dennis Township.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
December 9, 2014	Nor'Easter and Flooding	N/A	N/A	<p>A strong Nor'Easter brought strong winds and minor to moderate tidal flooding the Upper Delaware Bay and around Raritan Bay. There was moderate tidal flooding in Lower Delaware Bay and Atlantic Coastal New Jersey. The storm also caused minor to moderate beach erosion. Peak wind gusts ranged from 45 to 55 mph and downed trees, limbs and power lines. Tidal flooding from this event impacted all of the coastal counties in New Jersey.</p> <p>In Cape May County, the highest tide was at the Cape May Ferry Terminal and was 7.78 feet above mean lower low water (moderate tidal flooding). Peak wind gusts of 46 mph was recorded at Cape May Harbor. In West Wildwood, the George Redding Bridge (State Route 47) was closed. In Ocean City, tidal flooding reached the doorways of businesses on West Avenue. Schools in the County were closed due to this event.</p>
January 26, 2015	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought heavy snow and minor tidal flooding to parts of New Jersey. Snowfall in northwest New Jersey averaged one to five inches. A state of emergency was declared and a driving ban was enacted. Trains and ferries were operating on a modified schedule. There was minor coastal flooding during the high tide cycle during the predawn hours of the 27th, as well as some beach erosion. Snow began falling in the state during the early morning on the 26th. Precipitation started falling as rain in the southern half of the state before it turned over to snow. Overall snowfall totals across New Jersey ranged from 0.9 inches in Cumberland County to 12 inches in Monmouth County.</p> <p>In addition to snowfall, the storm system caused minor tidal flooding during the early morning high tide cycle on the 27th. The highest tide was reported at Sandy Hook (Monmouth County) which reached 7.17 feet above MLLW. In Cape May County, the highest tide at Cape May Ferry Terminal was 7.05 feet above MLLW (minor tidal flooding threshold is 6.70 feet above MLWW). Other locations in the County experienced tidal flooding as well and included the following: Ocean City (6.12 feet above MLLW), Avalon (6.22 feet above MLLW), Stone Harbor (6.66 feet above MLLW), and Cape May Harbor (6.53 feet above MLLW).</p>
August 21, 2015	Heavy Rain and Flooding	N/A	N/A	<p>Scattered showers and thunderstorms moved across southeastern Pennsylvania and into central and southern New Jersey. The thunderstorms were accompanied by heavy rainfall which led to areas of flash flooding. There was also isolated wind damage associated with this event. Rainfall totals ranged from two to five inches where flash flooding occurred.</p> <p>In Cape May County, the storms moved across portions of the County and flash flooding was reported in the City of North Wildwood. Numerous streets in the City were flooded and impassable. Overall, rainfall totals in the County ranged from 2.61 inches in Middle Township to 3.03 inches in the City of North Wildwood.</p>
October 2-3, 2015	Impacts from Hurricane Joaquin / Nor'Easter	N/A	N/A	<p>Hurricane Joaquin's path passed over or near parts of the northwestern Bahamas with maximum sustained winds near 130 mph, qualifying it as a Category 4 storm.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>Even though Joaquin’s path was east of Cape May County, the County felt the impacts of this storm as Nor’Easter impacted the State of New Jersey. This event caused periods of heavy rain, strong to high winds, beach erosion, power outages, and minor to moderate flooding. In some areas of the state, there was significant beach erosion. In many locations, waves carried away significant amounts of sand from the beach and dune systems that had been built up after Hurricane Sandy. The hardest hit counties in New Jersey included Cape May, Ocean, and Monmouth. Governor Christie declared a state of emergency for New Jersey prior to the start of the storm. Rainfall totals in the state ranged from 1.5 to 3.5 inches. Overall, the state had \$32 million in damages.</p> <p>In Cape May County, severe beach erosion was reported in North Wildwood. The storm left five foot or higher cliffs carved out of the dunes along sections of the beach. In Middle Township, a vacant and structurally unsound home was dislodged from its pilings in the Grassy Sound Channel behind North Wildwood on October 2<sup>nd</sup> and it floated into the Intracoastal Waterway before it broke apart and settled into the marsh. In addition to beach erosion, coastal flooding impacted Cape May County as well. Low-lying areas in the Strathmere section of Upper Township and Sea Isle City experienced in flooding. Moderate tidal flooding was reported at the Cape May tide gage – 8.07 feet above MLLW was recorded at 12:42pm on October 2<sup>nd</sup> (moderate tidal flooding starts at 7.7 feet above MLLW). Measured wind gusts in the county included 62 mph in the City of Cape May and 44 mph at the Cape May County Airport. Overall, the County had approximately \$12 million in damages from this event.</p>
January 22-24, 2016	Winter Storm & Coastal Flooding (Winter Storm Jonas)	DR-4264	Yes	<p>Snow began to develop on January 22<sup>nd</sup> from south to north. Across the coastal regions, the snow changed over to rain which limited the totals for those areas. There were intense bands of snow with rates of two to four inches per hour in north-central New Jersey and the Lehigh Valley in Pennsylvania. In addition to snow, there were strong wind gusts that topped out between 30 and 50 mph for most of the region. At the airports, most flights were cancelled due to the storm. Travel became nearly impossible at times for most of the areas impacted. Moderate to major tidal flooding occurred along the New Jersey and Delaware beaches which resulted in severe beach erosion and some property damage in coastal communities. Snowfall totals ranged from two to 32 inches, with the highest totals from Berks, Pennsylvania northwest to Allentown (Pennsylvania) and then into north-central New Jersey. In Cape May County, snowfall totals ranged from seven inches in the City of Cape May to 11.3 inches in Wildwood Crest. Peak wind gusts ranged from 50 mph in Cape May Point to 64 mph in Strathmere. In addition to snow and wind, coastal flooding impacted the county. In Cape May, there was a record storm surge of 9.4 feet. The tides in the County were as high as 10 feet in some parts which flooded garages and ground floors of buildings. Flood damage was significant as water</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>levels exceeded those observed during Sandy and ranked in the top 10 on record. Beach erosion was moderate to major. Major tidal flooding was reported at the Cape May tide gage – 8.98 feet above MLLW was recorded at 1:30pm on January 23<sup>rd</sup> (major tidal flooding starts at 8.7 feet above MLLW).</p>
February 8-10, 2016	Nor'Easter & Coastal Flooding	N/A	N/A	<p>A powerful Nor'Easter brought blizzard conditions to eastern Long Island and southeast New England and brought strong winds, rain and snow to the southern half of New Jersey. In Cape May County, snowfall totals were a minimum (0.2 inches in Middle Township and 0.6 inches in Cape May City). However, flooding was an issue in the County. The NWS issued a coastal flood warning for the county. During high tide, numerous streams were flooded and had to be closed. Moderate coastal flooding was reported at the Cape May tide gage – 8.159 feet above MLLW was recorded at 1:54pm on February 9<sup>th</sup> (moderate tidal flooding starts at 7.7 feet above MLLW).</p>

Source: FEMA 2015; NOAA-NCEI 2015; NWS 2015; SPC 2015; NJ HMP 2014; ONJSC 2016

- DR Disaster Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- HMP Hazard Mitigation Plan
- MLLW Mean Lower Low Water
- Mph miles per hour
- N/A Not Applicable
- NCDC National Climatic Data Center
- NHC National Hurricane Center
- NJ New Jersey
- NOAA National Oceanic and Atmospheric Administration
- NWS National Weather Service
- USGS U.S. Geological Survey





**E.2.3 Hurricane and Tropical Storm**

**Table E-3. Hurricane and Tropical Storm Events Impacting Cape May County, 1821 to 2016**

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 3, 1821	“Great Hurricane of 1821” or “Norfolk and Long Island Hurricane”	N/A	N/A	Category 4 storm causing major flooding throughout New Jersey State. The City of Cape May was named “Cape Island” at the time of the storm because a wall of water surged across the peninsula from Delaware Bay to the ocean. The hurricane overtopped every beach from the Cape May County to western Long Island with a storm surge of about 10 feet. Upon making landfall on the City of Cape May, the cyclone produced a five-foot storm surge on the Delaware Bay side of the City. Storm surges of 10 feet were reported along the Atlantic coastline of the County.
September 29-30, 1896	Hurricane	N/A	N/A	Cape May County lost large sections of its boardwalks. The Brunswick Hotel at the City of Sea Isle City was destroyed.
September 17-20, 1928	“The Great Okeechobee Hurricane”	N/A	N/A	In the City of Cape May, heavy waves wiped away sections of the boardwalk; shattered windows and many buildings sustained serious structural damage.
September 1938	Hurricane	N/A	N/A	This hurricane swept away miles of streets, homes and marinas. It reconfigured the barrier islands from Sea Bright to the City of Cape May.
September 12-14, 1944	Hurricane “The Great September Gale”	N/A	N/A	New Jersey had over \$25 M in damages from this event. All of Cape May County was seriously impacted. This storm caused severe beach erosion, flooding, and wind damage; and resulted in significant property losses. The City of Cape May suffered nearly \$8 M in damages and over 300 homes were evacuated. One fatality occurred as a result of a drowning in the City of Sea Isle City.
September 27, 1985	Remnants of Hurricane Gloria	DR-749	No	This storm resulted in a Disaster Declaration (DR-749) for multiple counties in New Jersey; however, Cape May County was not included in this declaration. The City of Cape May suffered damage to many buildings, including the Cape Island Baptist Church. The storm downed power lines, caused flooding, wind damage, and miscellaneous debris was spread throughout the County. The storm created severe floods in Cape May County with tide heights of 8.8 feet.
August 30, 1999	Remnants of Hurricane Dennis	N/A	N/A	Remnants of Hurricane Dennis created flooding and severe erosion throughout the southern New Jersey coastline. Swimming restrictions were in place, especially in Cape May County, where swimmers were only permitted to go into the water up to their ankles. Eight to 10-foot breakers were reported off the Cape May County beaches. Street flooding was reported in the City of Sea Isle City. The pounding surf also caused erosion, especially in Cape May County. Hardest hit was the Borough of Avalon, which experienced approximately \$700 K in losses when nearly 100,000 cubic yards of sand was lost between 9 <sup>th</sup> and 16 <sup>th</sup> Streets. The beach at the Borough of Cape May Point lost about one-foot of sand depth.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 16, 1999	Remnants of Hurricane/Tropical Storm Floyd	FEMA EM-3148	Yes	Minor beach erosion and back bay flooding were reported in Cape May County. In Cape May County, rain totals included 3.93 inches in Belleplaine, 3.12 inches in the City of Wildwood, 3.06 inches in the City of Cape May and 3.02 inches in the Borough of Stone Harbor. Cape May County experienced approximately \$492 K in property damages.
September 6-19, 2003	Remnants of Tropical Storm Isabel	N/A	N/A	Tropical Storm Isabel produced a storm surge along the New Jersey coastline of up to 6.5 feet in the City of Cape May. The City of Wildwood, along the southeast coast, reported 1.3 inches of rain. The storm produced slightly above normal tides and rough surf along the Jersey shore, killing one surfer off of the Borough of Wildwood Crest. In the City of Ocean City and the Borough of Avalon, waves eroded beaches by up to four feet. Sea Spray Avenue in the City of Ocean City suffered moderate erosion on 14 <sup>th</sup> Street. Whale Beach experienced locally severe erosion along their geotubes. The Borough of Avalon suffered moderate erosion from 8 <sup>th</sup> Street to 14 <sup>th</sup> Street. The Borough of Stone Harbor suffered moderate erosion from 106 <sup>th</sup> Street to 123 <sup>rd</sup> Street. The City of North Wildwood suffered moderate erosion at 9 <sup>th</sup> Avenue.
September 1, 2006	Remnants of Hurricane Ernesto	N/A	N/A	Remnants of Hurricane Ernesto hit coastal counties to be hard with both tidal and inland flooding and high winds. Atlantic-facing beaches sustained severe erosion with localized damage to dune systems in Cape May, Ocean and Atlantic Counties. Wind gusts in Cape May County reached around 80 mph. The City of Ocean City had vertical cuts that reached six feet with severe damage to their dunes. In Strathmere (Township of Upper) and the City of Sea Isle City, moderate dune damage was reported. The Geotubes were exposed at Whale Beach. Vertical cuts elsewhere in Cape May County averaged between two and five feet, but widths reached up to 150 feet in the City of Wildwood and the Borough of Wildwood Crest. The high winds throughout the County caused a three-story building under construction to collapse in the City of Wildwood. In the City of Ocean City, a couple of boats were pushed into the New Jersey State Route 52 Causeway and closed the bridge for ten hours. In the City of North Wildwood, the roof of the Montego Bay Resort was partially torn away. The hotel was briefly evacuated. Downed trees damaged homes in the City of North Wildwood and Cape May Court House. Waves at the beaches reached 10 to 15 feet. At high tide on the 1st, back bay flooding occurred in the Borough of Avalon and up to three feet of water on the roads in the City of Sea Isle City. Cape May County was the hardest hit in power outages in their service area and was the last area to have power restored.
November 3, 2007	Remnants of Hurricane Noel	N/A	N/A	Remnants of Hurricane Noel caused flooding and beach erosion throughout Cape May County. Vertical cuts averaged from one to four feet. In the City of Ocean City, the Delancy Street outfall pipe was in disrepair. In Strathmere, sand fencing was damaged. Off Sea View Avenue, a 10 foot vertical cliff was carved and a







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				residential bulkhead was exposed. In the Borough of Avalon, from 9 <sup>th</sup> through 20 <sup>th</sup> Streets, four foot vertical cuts to the top of the bulkhead caused rock revetment and outfall to be exposed.
November 11-14, 2009	Nor'Easter and Remnants of Tropical Storm Ida	FEMA DR-1867	Yes	FEMA declared a major disaster for Atlantic and Cape May Counties in New Jersey after the area was struck by severe storms and flooding associated with Tropical Depression Ida and a Nor'Easter. Damage estimates for a few coastal towns of New Jersey reached nearly \$100 million. Cape May County declared a state of emergency. Wind gusts reached up to 50 mph along the southern New Jersey coast. The Township of Lower had 50 consecutive hours of sustained wind over 39 mph with gusts reaching approximately 57 mph. Rainfall totals for Cape May County ranged between 1.70 inches and 2.69 inches. Peak wind gusts in the County ranged between 35 and 57 mph.
August 22-24, 2009	Hurricane Bill	N/A	N/A	Hurricane Bill passed east of the Mid-Atlantic Coast. Swells from the hurricane led to rough surf, moderate to severe erosion, and numerous and strong rip currents. The worst conditions occurred on August 22 <sup>nd</sup> as Hurricane Bill made its closest pass to the region. Waves reached up to 10 feet along the coast and led to numerous water rescues, bathing restrictions, and injuries. The worst erosion was reported in Cape May County. In Ocean City, near First Street, severe erosion occurred as geotubes were exposed on Waverly Beach. A wash over occurred at North Street where the slope reached five feet. In the Borough of Avalon, vertical cuts reached three to five feet on the north side of the Borough. In Cape May City, a three to five foot cufe in the dune occurred near Second Avenue. Other municipalities in the County reported vertical cuts that averaged one to two feet. Minor tidal flooding was not reported; however, high tide reached underneath the Ocean City boardwalk on August 22 <sup>nd</sup> .
August 29, 2009	Remnants of Tropical Storm Danny	N/A	N/A	The remnants of Tropical Storm Danny passed east of the coastline of New Jersey. It brought rip currents and heavy surf and waves reached as high as eight feet. Some beach erosion occurred but was not severe. In Cape May County, the storm brought high surf and rip currents.
November 11 – 15, 2009	Severe Storms and Flooding Associated with Tropical Depression Ida and a Nor'Easter	DR-1867	Yes	A powerful Nor'Easter produced wind gusts of nearly 60 mph, widespread moderate tidal flooding, heavy rain, and severe beach erosion along the New Jersey coastline. Several thousand people were without power in the state. A state of emergency was declared for Atlanta, Burlington, Cape May, Cumberland, Ocean and Monmouth Counties.  Cape May County reported the worst damage. There were no mandatory evacuations; however, approximately 100 people left their homes in Ocean City and Wildwood. Shelters were opened in Avalon, Lower Township and North Wildwood. During the morning high tide of November 13 <sup>th</sup> , nearly every bridge and causeway leading to the barrier islands in the county was closed. The Townsend Inlet Bridge between Sea Isle City and Avalon was closed through the 15 <sup>th</sup> after a work barge rammed into it. In Avalon, motorists had to be rescued from their cars due to flooding. Business districts in Avalon, Sea Isle City and Stone Harbor were all





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>flooded. Homes in Sea Isle City had homes that experienced flood damage to the first floor. Significant erosion was reported in Ocean City, Sea Isle City (three dune breaches) and Avalon. Ocean City lost seven million cubic yards of sand. There was no beach left north of 21<sup>st</sup> Street in Avalon. The high winds damaged the roofs of three motels in Wildwood along with one large restaurant sign. Service on the Cape May Lewes Ferry was limited. High tide reached 8.21 feet above mean low water which was the highest tide since February 5, 1998. Peak wind gusts ranged from 51 mph in Wildwood to 57 mph in Cape May City. Rainfall totals ranged from 2.24 inches in Middle Township to 2.69 inches in Sea Isle City. The County had over \$90 million in damages from this event.</p>
August 28-29, 2010	Hurricane Danielle	N/A	N/A	<p>Swells associated with Hurricane Danielle caused rough surf and enhanced rip currents along the shoreline of New Jersey. There were hundreds of rescues and three reported injuries. Many beaches were closed. In Cape May County, two children and an adult were injured in Ocean City. There were over 100 rescues during a two-day period.</p>
September 2-4, 2010	Hurricane Earl	N/A	N/A	<p>Hurricane Earl passed 165 miles east of Atlantic City and generated large swells, heavy surf, enhanced rip currents and minor tidal flooding. Many beaches were closed due to the conditions. The highest tides reached 6.18 feet above MLLW in Atlantic City and 6.78 feet above MLLW in Cape May (minor tidal flooding starts at 6.7 feet above MLLW).</p>
September 19-21, 2010	Hurricane Igor	N/A	N/A	<p>The swells from Hurricane Igor produced heavy surf and rip currents along the New Jersey coastline, including parts of Cape May County.</p>
August 27-28, 2011	Hurricane Irene	DR-4021	Yes	<p>Hurricane Irene produced torrential downpour rains that resulted in major flooding and a number of record breaking crests on area rivers, tropical storm force wind gusts, one confirmed tornado, and a 3- to 5-foot storm surge that caused moderate to severe tidal flooding with extensive beach erosion. This resulted in thousands of mandatory and voluntary evacuations along the coast and rivers from storm surge and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas that were subsequently impacted by the remnant moisture from Tropical Storm Lee in September. Moderate tidal flooding occurred along the tidal Delaware River and Delaware Bay and minor to moderate flooding occurred farther north along the Delaware River. Moderate to severe tidal flooding occurred along the Atlantic Coast and Raritan Bay. Waves were estimated to reach as high as 12 feet and offshore seas reached 25 feet. The wind and flooding across the state forced the closure of approximately 350 main roadways in the State including sections of I-287, the Garden State Parkway, and the New Jersey Turnpike. There were six direct deaths associated with this storm, all drownings. Governor Christie declared a state of emergency for all of New Jersey.</p> <p>In Cape May County, there were mandatory evacuations throughout the county. Vertical cuts averaged two to four feet. In the City of Cape May, a horizontal dune cut occurred on Poverty Beach. The highest wind gusts during Irene ranged from 53</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>mph in Wildwood to 75 mph at the Cape May Ferry Terminal (Lower Township). The Cape May Lewes Ferry suspended service for two days. The County also experienced moderate tidal flooding, with a peak tide of 8.55 feet above mean lower low water in the City of Cape May. Rainfall totals in the County ranged from 4.9 inches in Stone Harbor to 8.59 inches in Cedar Springs. The County had approximately \$5.5 million in damages from this event.</p>
October 29, 2012	Hurricane Sandy	DR-4086	Yes	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable. Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>In Cape May County, rainfall totals ranged from 3.53 inches at Dias Creek to 11.91 inches at Wildwood Crest. Peak wind gusts in the County ranged from 60 mph in Ocean City to 81 mph in Dennisville. The maximum water level for the County was in Cape May and measured at 8.91 feet MLLW and a storm surge of 3.51 feet was reported. The County had approximately \$175 million in damages from this event. The County and its municipalities received over \$40 million in obligated reimbursements for damage caused by Hurricane Sandy. Additionally, the County received \$1.24 million in HMGP funds for the energy allocation initiative generator projects. The County also received over \$2.3 million for HMGP local projects/county infrastructure projects. Over \$780,000 was received by FEMA elevation grants for nine properties in the County.</p>

Source: FEMA 2015; NOAA-NCEI 2015; NWS 2015; SPC 2015; NJ HMP 2014; ONJSC 2016

- DR Disaster Declaration (FEMA)
- FEMA Federal Emergency Management Agency
- HMP Hazard Mitigation Plan
- Mph miles per hour
- N/A Not Applicable
- NCDC National Climatic Data Center
- NHC National Hurricane Center
- NJ New Jersey
- NOAA National Oceanic and Atmospheric Administration
- NWS National Weather Service







E.2.4 Nor'Easter

Table E-3. Nor'Easter Events in Cape May County, 1882 to 2016

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 1882	Coastal Storm	N/A	N/A	Railroad tracks and a railroad bridge were washed away across Ludlum's Thoroughfare in the City of Sea Isle City.
February 16, 1885	Coastal Storm	N/A	N/A	Considerable loss of property occurred. The center of the City, boardwalk and beach drive were intact, the lower end of the boardwalk was destroyed. Sewell's Point Drive was ruined and the railroad to that point was washed away. Carlton Hall at the Borough of Cape May Point was severely damaged and almost ripped off its foundation. The tracks to the Jackson Street Station were covered with two feet of water. The Sea Isle and Ocean City railway were rendered impassable by the high seas.
September 19, 1889	Coastal Storm	N/A	N/A	The storm caused significant damage to the Ludlum Beach Lighthouse in the City of Sea Isle City.
February 8, 1896	Coastal Storm	N/A	N/A	The greatest damage in the lower part of New Jersey occurred in the Borough of Cape May Point, where the ocean made great inroads on the beach. The storm cost the borough many thousands of dollars.
August 21-23, 1933	Nor'Easter	N/A	N/A	A Nor'Easter struck the New Jersey coast, bringing 90-mph winds and waves that picked up the 300-foot boardwalk in the City of Cape May. Much of the convention center in the City was damaged.
March 6-8 1962	Severe Storm, High Tide, Flood "Ash Wednesday Storm" or "Great Atlantic Storm of 1962"	FEMA DR-124	Yes	Most damaging northeast storm since the 1888 Blizzard struck New Jersey. The Nor'easter of 1962 caused more damage than any other single storm in Cape May's history. Cape May County experienced approximately \$3 M in property damages (1962 USD). The Red Cross reported that a total of 1,259 dwellings in Cape May County were destroyed during the storm. The storm also eroded hundreds of feet of beachfront throughout the County.
October 30-31, 1991	Coastal Storm ("The Perfect Storm" or "1991 Halloween Nor'Easter")	N/A	N/A	New Jersey had over \$90 M in damages from this event. Cape May County experienced between \$1.7 M and \$4 M in property damages.
December 11-13, 1992	Coastal Storm/High Tides/Heavy Rain/Flooding ("Great Nor'Easter of 1992")	FEMA DR-973	Yes	Limited information available for this disaster in New Jersey. New Jersey had \$4.85 M in public assistance and \$237 K in hazard mitigation funding. The Hazards and Vulnerability Research Institute (SHELDUS) indicate that Cape May County experienced approximately \$16 K in property damages.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
November 14, 1997	Coastal Storm	N/A	N/A	<p>Cape May County was hit the hardest by this Nor'Easter. In the City of Sea Isle City, about 290,000 cubic yards of beach was lost due to erosion, nearly a fourth of this occurred in the south end beaches from 89<sup>th</sup> Street to the Townsend's Inlet Bridge. Seventy truckloads of fill brought in after the previous week's Nor'Easter was all washed away. Water came within about five feet of the Tiburon Shores Condominiums and wood pylons became exposed. Beach damage was described as "considerable" at the Cape May Point Beach. Cars were submerged at high tide in both the City of Ocean City and City of Cape May. Two roads in the City of Wildwood were closed because of tidal flooding. Tides reached 7.8 feet above mean low water at Sandy Hook, 7.5 feet above mean low water in Atlantic City and 7.9 feet above mean low water in the City of Cape May.</p>
November 22, 2006	Coastal Storm	N/A	N/A	<p>A Nor'Easter brought heavy rain, strong winds, rough surf and tidal flooding to coastal areas of New Jersey on the 22<sup>nd</sup> and 23<sup>rd</sup> (Thanksgiving Day) and hit Cape May and Atlantic Counties the hardest. Rain totals averaged around two inches in Cape May County. The county took the brunt of the damage. In the City of Ocean City, a 10 to 18 foot vertical by 10 to 20 foot horizontal cut to the dune system was reported between East Atlantic and Sea Spray. Vertical cuts of four feet by eight feet were reported throughout its coast. In the City of Sea Isle City, an eight foot by 10 foot vertical by 10 foot horizontal cut occurred. In the Boroughs of Avalon and Stone Harbor, four to eight foot vertical cuts occurred. Dune fencing was damaged in the Borough of Stone Harbor. Elsewhere in the County, vertical cuts averaged one to three feet. Peak wind gusts reached 57 mph in Cape May Harbor and the City of Ocean City, 51 mph in Barnegat Light (Ocean County), 47 mph in Avalon (Cape May County), and 46 mph in Harvey Cedars (Ocean County) and at the Atlantic City Marina (Atlantic County).</p>
April 14-17, 2007	Severe Storms / Inland and Coastal Flood (also identified as a Nor'easter)	N/A	N/A	<p>This storm resulted in a Disaster Declaration (DR-1694) for multiple New Jersey State counties; however, it did not include Cape May County. In Cape May County, the high tide forced the closure of the George Redding Bridge in the City of Wildwood (New Jersey State Route 47) and Ocean Drive (County Route 619) between the City of Ocean City and Strathmere. Tidal flooding also occurred on the Delaware Bay side with wave damage reported to several homes in Reeds Beach (Township of Middle). The pounding surf also caused the geotubes to become exposed in Strathmere. Most of the vertical cuts were one to three feet, except for a small section in the City of Cape May City where the vertical cut to the beaches reached six feet. Cape May County experienced flood tides of 7.8 feet.</p>
May 12-13, 2008	Coastal Storm (Nor'Easter)	N/A	N/A	<p>This Nor'Easter caused very high winds and coastal flooding throughout Cape May County. Numerous roads and bridges were closed in the Borough of West Wildwood, the City of North Wildwood, the City of Ocean City, the City of Sea</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>Isle City and the Borough of Avalon. Over 60,000 residents in Cape May County were without power. Standing floodwaters and debris prevented many crews from reaching parts of Strathmere and the City of Sea Isle City. Dozens of cars in the Borough of West Wildwood were destroyed due to flooded roadways. Schools were closed in the City of Wildwood, the City of North Wildwood and the Borough of West Wildwood due to tidal flooding. The Route 52 Causeway between the City of Ocean City and Somers Point had to be closed. Beach erosion was reported throughout the County. Cape May County experienced flood tides of 8.0 feet.</p>
<p>October 15-19, 2009</p>	<p>Coastal Flood and High Surf (Nor'Easter)</p>	<p>N/A</p>	<p>N/A</p>	<p>A pair of Nor'Easters impacted the east coast. The first moved from the Tennessee Valley to the northern North Carolina coastal waters to the southeast of Cape Cod, Massachusetts. The second Nor'Easter formed off the Delmarva coastal waters and moved to the northeast and passed through Nova Scotia. These storms brought tidal flooding, heavy surf, erosion, and flooding of major roadways.</p> <p>In Cape May County, a state of emergency was declared on the 16th. In Sea Isle City, a school bus had to be rescued from flood waters. The National Guard was deployed to help with evacuations in Avalon, Lower Township, Ocean City, Stone Harbor, West Wildwood, and Wildwood. There were major roadway closures due to tidal flooding including the 9th Street Bridge (State Route 52) to Ocean City, the Townsends Inlet Bridge between Sea Isle City and Avalon and the Georg Reading Bridge (State Route 47) between Middle Township and Wildwood. In Avalon, at the Townsends Inlet Bridge, an overwash of the seawall at Ocean Drive caused 20 feet of road shoulder to collapse on the west side of the roadway. Other road closures were reported in Sea Isle City and Strathmere. Four feet of water accumulated on some roadways in West Wildwood.</p> <p>The highest tides in the County occurred with the morning tide on the 17th. Elsewhere, along the ocean, the highest tides occurred with the morning high tide on the 18th. At the Cape May Ferry Terminal, the tide reached 8.16 feet above MLLW, with moderate tidal flooding starting at 7.7 feet above MLLW. There were vertical cuts averaging one to three feet in the County. In Ocean City, an eight foot by 14 foot cut in the dune occurred from Pennyland Avenue north to the 9th Street Bridge. Geotubes were exposed along Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the south end of the municipality. In Avalon, vertical cuts reached up to 12 feet between 11th and 26th Streets. In Stone Harbor, a six foot by 10 foot dune cut occurred from 100th through 115th Streets. In Cape May, a 10-foot high by six-foot wide due cut occurred for 300 feet at Wilmington Avenue. Minor beach erosion also occurred on the Delaware Bay side of the County.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
November 11 – 15, 2009	Severe Storms and Flooding Associated with Tropical Depression Ida and a Nor'Easter	DR-1867	Yes	<p>A powerful Nor'Easter produced wind gusts of nearly 60 mph, widespread moderate tidal flooding, heavy rain, and severe beach erosion along the New Jersey coastline. Several thousand people were without power in the state. A state of emergency was declared for Atlanta, Burlington, Cape May, Cumberland, Ocean and Monmouth Counties.</p> <p>Cape May County reported the worst damage. There were no mandatory evacuations; however, approximately 100 people left their homes in Ocean City and Wildwood. Shelters were opened in Avalon, Lower Township and North Wildwood. During the morning high tide of November 13<sup>th</sup>, nearly every bridge and causeway leading to the barrier islands in the county was closed. The Townsend Inlet Bridge between Sea Isle City and Avalon was closed through the 15<sup>th</sup> after a work barge rammed into it. In Avalon, motorists had to be rescued from their cars due to flooding. Business districts in Avalon, Sea Isle City and Stone Harbor were all flooded. Homes in Sea Isle City had homes that experienced flood damage to the first floor. Significant erosion was reported in Ocean City, Sea Isle City (three dune breaches) and Avalon. Ocean City lost seven million cubic yards of sand. There was no beach left north of 21<sup>st</sup> Street in Avalon. The high winds damaged the roofs of three motels in Wildwood along with one large restaurant sign. Service on the Cape May Lewes Ferry was limited. High tide reached 8.21 feet above mean low water which was the highest tide since February 5, 1998. Peak wind gusts ranged from 51 mph in Wildwood to 57 mph in Cape May City. Rainfall totals ranged from 2.24 inches in Middle Township to 2.69 inches in Sea Isle City. The County had over \$90 million in damages from this event.</p>
December 19-20, 2009	Winter Storm and Nor'Easter	N/A	N/A	<p>A Nor'Easter brought heavy snow throughout New Jersey and produced strong gusty winds along the coastline. The heaviest snow fell along and east of the Interstate 95 corridor. Snowfall totals ranged from 3 inches in Sussex County to 24 inches across central and southern New Jersey. In addition to the snow and wind, the storm also led to minor tidal flooding in Atlantic and Cape May Counties.</p> <p>In Cape May County, the storm caused service interruptions on the 19<sup>th</sup> and 20<sup>th</sup> on the Cape May/Lewes Ferry. About 3,000 homes and businesses were without power in the County, with Ocean City being the hardest hit. The 9<sup>th</sup> Street Bridge was closed until the 21<sup>st</sup> in Ocean City because a tugboat broke free from its moorings and crashed against the bridge. The morning high tide on the 19<sup>th</sup> forced the closure of three bridges in Cape May County: The George Redding Bridge into Wildwood, The Townsend's Inlet Bridge between Avalon and Sea Isle City and the Beesleys Point Bridge between Upper Township and Somers Point. Snowfall totals in the County ranged from 1.5 inches in Scotch Bonnet (Borough of Stone Harbor) to 18.3 inches in Eldora (Dennis Township).</p>







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
February 9-11, 2010	Winter Storm (Nor'Easter)	N/A	N/A	This was the second winter storm within a week. Blizzard conditions occurred at times across the extreme southern portion of the State of New Jersey. Snowfall totals averaged seven to 15 inches across northwest New Jersey, 12 to 20 inches across central New Jersey and six to 12 inches across the southern portion. Snowfall totals in Cape May County ranged from three inches in Ocean City to 7.1 inches in the City of Cape May. Overall, there was approximately \$500,000 in damages in the State.
December 26-27, 2010	Severe Winter Storm and Snowstorm (Nor'Easter)	DR-1954	Yes	A strong Nor'Easter impacted the mid-Atlantic region between December 26 <sup>th</sup> and December 27 <sup>th</sup> . This storm brought heavy bands of snow and strong winds across New Jersey, with snowfall totals ranging from 18 to 24 inches. Wind gusts of up to 61 mph were recorded in the coastal areas of the State. Portions of the Garden State Parkway were shutdown with hundreds of cars left stranded. Snow drifts reached 8 to 9 feet in some locations and turned a once clear, plowed road, into an impassable piece of asphalt. A state of emergency was declared for New Jersey. Snow totals in Cape May County ranged from 13 inches in Beesley's Point (Upper Township) to 26.5 inches in Dennisville (Dennis Township). Peak wind gust of 50 mph was recorded in the City of Cape May and 59 mph was recorded in the Borough of West Cape May.
March 6-7, 2013	Coastal Flooding / Nor'Easter	N/A	N/A	<p>An intense Nor'Easter brought strong to high winds across most of central and southern New Jersey as well as minor to moderate tidal flooding along Raritan Bay, lower Delaware Bay and on the ocean side. Peak wind gusts reached around 70 mph and downed trees, tree limbs and wires and caused some structural damage. About 50,000 homes and businesses lost power. Moderate to minor tidal flooding occurred during the high tide cycles on March 6<sup>th</sup> and 7<sup>th</sup>. Wave action and heavy rain also occurred during this storm. Additionally, the north to northeast winds prevented the back bays from emptying. Overall, the state had approximately \$745,000 in property damage from this event.</p> <p>In Cape May County, rainfall totals included 1.64 inches at Wildwood Crest and 1.46 inches at Middle Township. The highest tide reached 7.54 feet above MLLW in Cape May. High tide in Sea Isle City reached 7.29 feet above MLLW. Tidal flooding closed the George Redding Bridge (State Route 47). Roadway flooding was reported in Ocean City, Avalon and Stone Harbor. In Sea Isle City, vehicles were trapped in flood waters on Landis Avenue. In North Wildwood, Angelsea Drive was closed. Peak wind gusts included 69 mph in the Cities of Ocean City and Cape May, 67 mph in Cape May Harbor and 56 mph in West Cape May. The high winds blew off part of the roof of a condominium in Stone Harbor. The winds also downed poles and wires that resulted in the closure of Stone Harbor Boulevard. Additionally, the winds resulted in the cancellation of four crossing by the Cape May-Lewes Ferry. The County had approximately \$145,000 in property damage from this event.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
December 9, 2014	Nor'Easter and Flooding	N/A	N/A	<p>A strong Nor'Easter brought strong winds and minor to moderate tidal flooding the Upper Delaware Bay and around Raritan Bay. There was moderate tidal flooding in Lower Delaware Bay and Atlantic Coastal New Jersey. The storm also caused minor to moderate beach erosion. Peak wind gusts ranged from 45 to 55 mph and downed trees, limbs and power lines. Tidal flooding from this event impacted all of the coastal counties in New Jersey.</p> <p>In Cape May County, the highest tide was at the Cape May Ferry Terminal and was 7.78 feet above mean lower low water (moderate tidal flooding). Peak wind gusts of 46 mph was recorded at Cape May Harbor. In West Wildwood, the George Redding Bridge (State Route 47) was closed. In Ocean City, tidal flooding reached the doorways of businesses on West Avenue. Schools in the County were closed due to this event.</p>
October 2-3, 2015	Impacts from Hurricane Joaquin / Nor'Easter	N/A	N/A	<p>Hurricane Joaquin's path passed over or near parts of the northwestern Bahamas with maximum sustained winds near 130 mph, qualifying it as a Category 4 storm. Even though Joaquin's path was east of Cape May County, the County felt the impacts of this storm as Nor'Easter impacted the State of New Jersey. This event caused periods of heavy rain, strong to high winds, beach erosion, power outages, and minor to moderate flooding. In some areas of the state, there was significant beach erosion. In many locations, waves carried away significant amounts of sand from the beach and dune systems that had been built up after Hurricane Sandy. The hardest hit counties in New Jersey included Cape May, Ocean, and Monmouth. Governor Christie declared a state of emergency for New Jersey prior to the start of the storm. Rainfall totals in the state ranged from 1.5 to 3.5 inches. Overall, the state had \$32 million in damages.</p> <p>In Cape May County, severe beach erosion was reported in North Wildwood. The storm left five foot or higher cliffs carved out of the dunes along sections of the beach. In Middle Township, a vacant and structurally unsound home was dislodged from its pilings in the Grassy Sound Channel behind North Wildwood on October 2<sup>nd</sup> and it floated into the Intracoastal Waterway before it broke apart and settled into the marsh. In addition to beach erosion, coastal flooding impacted Cape May County as well. Low-lying areas in the Strathmere section of Upper Township and Sea Isle City experienced in flooding. Moderate tidal flooding was reported at the Cape May tide gage – 8.07 feet above MLLW was recorded at 12:42pm on October 2<sup>nd</sup> (moderate tidal flooding starts at 7.7 feet above MLLW). Measured wind gusts in the county included 62 mph in the City of Cape May and 44 mph at the Cape May County Airport. Overall, the County had approximately \$12 million in damages from this event.</p>
February 8-10, 2016	Nor'Easter & Coastal Flooding	N/A	N/A	<p>A powerful Nor'Easter brought blizzard conditions to eastern Long Island and southeast New England and brought strong winds, rain and snow to the southern half of New Jersey. In Cape May County, snowfall totals were a minimum (0.2 inches in Middle Township and 0.6 inches in Cape May City). However, flooding</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>was an issue in the County. The NWS issued a coastal flood warning for the county. During high tide, numerous streams were flooded and had to be closed. Moderate coastal flooding was reported at the Cape May tide gage – 8.159 feet above MLLW was recorded at 1:54pm on February 9<sup>th</sup> (moderate tidal flooding starts at 7.7 feet above MLLW).</p>

Source(s): NOAA NCDC 2016; NWS 2016; FEMA 2016

FEMA Federal Emergency Management Agency

MLLW Mean Lower Low Water

Mph Miles per hour

NCDC National Climatic Data Center

NOAA National Oceanic and Atmospheric Administration

NWS National Weather Service

N/A Not Applicable





**E.2.5 Severe Weather**

**Table E-4. Severe Weather Events in Cape May County, 1898 to 2016**

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 26, 1898	Severe Storm	N/A	N/A	A severe storm passed over the City of Cape May during the night of the 26 <sup>th</sup> . It caused considerable damage due to wind and lightning. A smokestack of the electric power house was destroyed. Lightning struck the whistle of a train on the Delaware Bay Railroad. This broke the whistle and caused the steam in the boiler to blow off, which stalled the train.
August 24, 1902	Severe Storm / Waterspouts	N/A	N/A	A severe storm brought loud thunder, heavy rain and strong winds. The storm also produced two waterspouts off the shore of the County.
August 10, 1952	Tornado (F1)	N/A	N/A	F1 tornado struck Cape May County. Property damage was approximately \$25 K.
May 6, 1956	Tornado (F2)	N/A	N/A	F2 tornado struck near the Borough of Woodbine. Property damage was approximately \$25 K.
March 6-8, 1962	Severe Storm, High Tide, Flooding ("Ash Wednesday Storm" or "Great Atlantic Storm of 1962")	FEMA DR-124	Yes	Most damaging northeast storm since the 1888 Blizzard struck New Jersey. The Nor'Easter of 1962 caused more damage than any other single storm in Cape May County's history. The County experienced approximately \$3 M in property damages (1962 USD). The Red Cross reported that a total of 1,259 dwellings in Cape May County were destroyed during the storm. The storm also eroded hundreds of feet of beachfront throughout the County.
August 27, 1971	Tornado (F2)	N/A	N/A	F2 tornado struck off the coast of the City of Cape May and continued north into the City of Corbin (Atlantic County). Overall property damage was approximately \$250 K. Property damage for the County was approximately \$50 K.
September 6, 1979	Tornado (F1)	N/A	N/A	F1 tornado struck near the Community of Clermont. Property damage was approximately \$250 K.
September 27, 1985	Tornado (F0)	N/A	N/A	F0 tornado struck near the City of Ocean City. Property damage was approximately \$300.
September 23, 1986	Tornado (F0)	N/A	N/A	F0 tornado struck near the Borough of Woodbine, near the airport. Property damage was approximately \$250 K.
May 27, 1989	Tornado (F0)	N/A	N/A	F0 tornado struck near the Township of Upper. Property damage was approximately \$2.5 K.
December 11-13, 1992	Coastal Storm, High Tides, Heavy Rain, Flooding ("Great Nor'Easter of 1992")	FEMA DR-973	Yes	Bergen, Essex, Hudson, Somerset, Union, Middlesex, Monmouth, Ocean, Salem, Atlantic, Cumberland, and Cape May Counties were declared disaster areas. Total damages for this event were estimated at \$2 B. Cape May County suffered an estimated \$8.9 M in private property losses and \$7.9 M in public property losses. The county also suffered severe beach erosion. The storm created moderate floods in Cape May County with tide heights of 8.6 feet.
May 12, 1993	TSTM / Wind / Hail	N/A	N/A	Wind gusts of 59 mph were reported. Pea-size hail and 1.5 inches of rain fell in 20 minutes.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
July 16, 1995	TSTM / Wind	N/A	N/A	A series of severe TSTMs hit the Lower Susquehanna Valley and moved into southern Pennsylvania and New Jersey. The storms struck Cape May County before heading offshore. They produced isolated reports of uprooted trees throughout the County. Two roofs were blown off. A car was damaged. The worst damage occurred in the Borough of Stone Harbor. A F1 tornado touched down in Paradise Bay and cut across Paradise Drive. Damaged occurred to four houses facing bay side.
March 8 – 12, 1998	Heavy Rain	N/A	N/A	A low pressure system passed through the Mid-Atlantic states and caused New Jersey to have five days of continuous rain, from March 8 <sup>th</sup> through March 12 <sup>th</sup> . Storm totals ranged between 2.4 inches and 5.8 inches. The heaviest rain during this event fell in Cape May County on March 12 <sup>th</sup> . 2.76 inches of rain fell in the Township of Dennis.
March 9, 1998	Strong Winds	N/A	N/A	Strong winds, gusting to 55 mph, blew over eastern New Jersey and caused minor tidal flooding at high tide. In the City of Sea Isle City, winds blew down a house under construction.
June 1, 1998	TSTM / Wind	N/A	N/A	A line of severe TSTMs brought isolated pockets of wind damage throughout the County. The strong winds knocked down a flag pole and trees and broke some street signs.
August 18, 1998	TSTM / Wind	N/A	N/A	A severe TSTM hit Cape May County in the northern area, near the City of Sea Isle City. The winds blew out several windows and knocked over lifeguard stands. In the north section of the City of Cape May, 60 mph winds were reported by one of the ferry ships.
October 17 – 18, 1999	Heavy Rain (Remnants of Hurricane Irene)	N/A	N/A	Heavy rain fell across coastal sections of Atlantic, Ocean and Cape May Counties. The rain was due to Hurricane Irene, located 225 miles offshore. Heaviest rain fell around the City of Cape May, with totals between 2.5 and 3.0 inches. In other areas, storm totals ranged between 1.5 and 2.5 inches. In the City of Wildwood, 2.03 inches of rain fell.
July 26, 2000	Heavy Rain	N/A	N/A	Showers and TSTMs spread across New Jersey. Heaviest rain fell along the immediate shore. Heavy rain fell across Atlantic and Cape May Counties. 4.20 inches of rain fell in the City of Wildwood.
May 2, 2002	TSTM / Lightning	N/A	N/A	TSTMs brought heavy rain and lightning to the County. Rain fell about two inches within an hour across the County. The heavy rain caused street flooding. A lightning strike caused a power outage in and around the City of North Wildwood, affecting approximately 5,000 people.
May 18, 2002	TSTM / Hail	N/A	N/A	Winds from TSTMs knocked over tents at a campground in the City of Wildwood. Wind gusts peaked at 48 mph at the Cape May Ferry Terminal and 38 mph at the Rio Grande Airport.
June 2, 2002	Lightning	N/A	N/A	Lightning struck and hit a metal fire escape at the side of a hotel in the City of Ocean City. This caused a fire and spread to the third and fourth floors of the hotel. Total damage was approximately \$50 K.
March 12, 2003	Strong Winds	N/A	N/A	Gusty northwest winds hit the County, with peak wind gusts reaching 44 mph. The winds snapped a tree on Goshen-Swaiton Road in the Township of Middle. One home lost power due the tree. Property damage was approximately \$5 K.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
July 3, 2003	Tornado (F0)	N/A	N/A	A weak tornado briefly touched down in a marsh southwest of Goshen.
August 22, 2003	TSTM / Wind	N/A	N/A	A severe TSTM brought down several trees in the Township of Lower. In Cape May Harbor, wind gusts reached 74 mph. Approximately 12,000 customers were without power in southern New Jersey.
October 14, 2003	TSTM / Wind	N/A	N/A	A line of severe TSTMs knocked down several trees and power lines in the County, from the City of Cape May to the City of Wildwood. A 57 mph wind gust was reported in the City of Wildwood. Approximately 38,000 people were without power due to this storm. Cape May County had approximately \$32 K in property damage.
April 12 – 13, 2004	Heavy Rain	N/A	N/A	A slow moving low pressure produced rain across New Jersey from the 12 <sup>th</sup> through the 13 <sup>th</sup> . Heaviest rain fell during the evening of the 12 <sup>th</sup> and the 13 <sup>th</sup> . Two-day storm totals ranged between 2.0 inches and 4.0 inches, with the highest amounts in southeastern New Jersey. 3.25 inches of rain fell in the City of Wildwood.
November 5, 2004	Strong Winds	N/A	N/A	Wind gusts blew in the New York City region mid-day on the 5 <sup>th</sup> . Tree limbs were down, power outages reported and one fatality occurred. Wind gusts reached 58 mph in the City of Cape May.
May 20, 2005	Heavy Rain	N/A	N/A	Heavy rain fell, bringing totals between 2 and 3 inches. Strong winds accompanied this storm, downing trees and tree limbs. In the Borough of West Cape May, 3.26 inches of rain fell; 2.92 inches in the City of North Wildwood; and 2.72 inches in the City of Ocean City. Peak wind gust of 45 mph was at the Rio Grande Airport in Cape May County.
July 27, 2005	TSTM / Wind	N/A	N/A	A severe TSTM downed several trees in the Township of Dennis near the intersection of Routes 83 and 47. Scattered power outages occurred throughout the County. Several people were stuck on a rollercoaster at Morey's Pier in the City of North Wildwood due to the power outage.
August 27, 2006	Funnel Cloud	N/A	N/A	A funnel cloud was spotted in South Seaville in the Township of Dennis, along Route 668. It did not touch down.
November 8, 2006	Heavy Rain	N/A	N/A	Heavy rain hit New Jersey, bringing average storm totals between 2 and 3 inches. In Cape May County, 1.93 inches of rain fell in the Borough of Woodbine.
October 28, 2006	High Wind	N/A	N/A	Strong winds and heavy rain struck New Jersey and surrounding states. In Cape May County, 47 mph wind gusts were measured at the Rio Grande Airport in the City of Wildwood. In the Borough of Avalon, 52 mph wind gusts were measured at the Avalon Automated Coastal Station.
November 12 – 13, 2006	Heavy Rain	N/A	N/A	Rain fell across southeastern New Jersey, falling heavy at times. There was some urban and poor drainage area flooding. Storm totals averaged between 2 and 3 inches. In Cape May County, the Community of Green Creek at 2.30 inches of rain, the City of Wildwood had 2.75 inches of rain and the Community of Petersburg had 1.80 inches of rain.
June 12, 2007	TSTM / Hail	N/A	N/A	A severe TSTM brought penny to nickel size hail to Cape May County and surrounding areas. Wind gusts reached 40 mph in the County.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
October 9, 2007	TSTM	N/A	N/A	A microburst caused wind damage at the Woodbine Municipal Airport, located within the Borough of Woodbine. Several hangers and aircrafts were damaged. A couple of trees and large tree limbs were down in the Borough. Wind gusts at the airport reached 75 mph. Property damage was approximately \$200 K.
March 5, 2008	TSTM / Wind	N/A	N/A	Wind from a line of TSTMs pulled off a piece of roof of a motel in the City of Wildwood and landed in a swimming pool. The same storm downed a swing set, wires and telephone poles on Channel Road in the Borough of Avalon. Several poles and trees were down in the Dennisville (Township of Dennis). Property damage was approximately \$10 K.
May 31, 2008	TSTM / Funnel Cloud	N/A	N/A	TSTMs hit the County during the afternoon. Frequent cloud to ground lightning was produced during these storms. One of the lightning bolts struck a pole in the City of Ocean City. This caused approximately \$1 K in property damage. One of the storms produced a weak rotation, creating a funnel cloud, and was spotted east of the Borough of Woodbine.
July 27, 2008	TSTM / Lightning	N/A	N/A	Severe TSTMs hit the area and at least 12 people in New York State and New Jersey were struck by lightning. In Cape May County, four people were struck by lightning. Two were at Colton Court Beach in the City of Cape May; one was at a Cape May-area parking lot; and a fourth person was struck at Morey's Piers in the City of Wildwood.
August 2, 2008	TSTM / Wind	N/A	N/A	A severe TSTM downed trees and wires in the Townships of Middle and Dennis. A 54 mph wind gust was reported at the Cape May Coast Guard Station.
August 10, 2008	Hail	N/A	N/A	Severe TSTMs hit across New Jersey. The storms brought large hail storms occurred in southern New Jersey. The U.S. Secretary of Agriculture declared 10 counties a natural disaster area on September 22 <sup>nd</sup> – Mercer, Monmouth, Burlington, Ocean, Camden, Gloucester, Atlantic, Salem, Cumberland and Cape May Counties. In Cape May County, penny-size fell in Rio Grande in the Township of Middle.
November 11-14, 2009	Nor'Easter and Remnants of Tropical Storm Ida	FEMA DR-1867	Yes	FEMA declared a major disaster for Atlantic and Cape May Counties in New Jersey after the area was struck by severe storms and flooding associated with Tropical Depression Ida and a Nor'Easter. Damage estimates for a few coastal towns of New Jersey reached nearly \$100 million. Cape May County declared a state of emergency. Wind gusts reached up to 50 mph along the southern New Jersey coast. The Township of Lower had 50 consecutive hours of sustained wind over 39 mph with gusts reaching approximately 57 mph. Rainfall totals for Cape May County ranged between 1.70 inches and 2.69 inches. Peak wind gusts in the County ranged between 35 and 57 mph.
September 10-11, 2009	Heavy Rains and Flooding	N/A	N/A	A low pressure system moved into the northeast toward Delaware and New Jersey. It brought tidal flooding, beach erosion and wave action and had the highest impact on coastal areas. Peak wind gusts reached between 40 and 60 mph across the eastern parts of New Jersey with the highest gusts in Atlantic County. The combination of the persistent winds and heavy rain caused downed trees across the region. The largest effect along the shore was the wave action which led to erosion from the pounding surf. In Cape May County, there was heavy rain and strong winds that caused flash flooding and erosion. Most vertical cuts averaged one to two feet, but reached as high as four feet in





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>Ocean City, six feet in Sea Isle City, and seven feet in Avalon. In Ocean City, geotubes were exposed at Surf Avenue. In Sea Isle City, vertical cuts reached six feet at the 88th Street groin. The Townsend Inlet Bridge was closed between Sea Isle City and Avalon. In Avalon itself, the vertical cuts reached 7 feet between 10th and 24th Streets. In Stone Harbor, dune fencing was lost and in North Wildwood, a remnant dune in the inlet disappeared. Peak wind gusts in the County ranged from 48 mph in Ocean City to 51 mph in Cape May. Minor tidal flooding occurred with the early morning high tide as it reached 6.96 feet above MLLW (minor tidal flooding starts at 6.7 feet above MLLW). Rainfall totals ranged from 3.71 inches in Ocean City to 4.58 inches in Eldora. Flash flooding was reported in Cape May City, Wildwood, Wildwood Crest, Villas (Lower Township), Rio Grande (Upper Township) and Ocean City. The County had approximately \$20,000 in property damage from this event.</p>
March 12-13, 2010	Severe Storms and Flooding	DR-1897	Yes	<p>The pounding surf and moderate to locally severe coastal flooding impacted areas along the New Jersey coastline. In Cape May County, vertical cuts averaged two to five feet, with dune cuts reported in Avalon, North Wildwood, and Cape May. Minor flooding occurred in parts of the County. The City of Cape May had one of the highest tides reported at 7.41 feet above mean lower low water. Rainfall totals in the County ranged from 3.22 inches in Wildwood to 4.55 inches in Woodbine. In addition to the heavy rains, there were strong winds that downed trees, limbs and utility poles, causing power outages. Peak wind gusts in the County included 62 mph in Ocean City. There were six injuries associated with this event. The County had approximately \$500,000 in property damage from this event.</p>
July 24, 2010	Thunderstorms	N/A	N/A	<p>Isolated thunderstorms moved impacted the southern half of New Jersey, causing damage in parts of Cape May County. A severe thunderstorm caused wind damage in Ocean City. Part of the roof was torn away from the Seabreeze Apartments and the roof of the Sun Aqua motel was dislodged. Homes were also damaged. On the beach, 13 lifeguard stands were destroyed and 12 beach patrol surf boats tumbled down the beach. A wind gust of 66 mph was recorded within Ocean City. This event caused approximately \$250,000 in property damage.</p>
August 27-28, 2011	Hurricane Irene	DR-4021	Yes	<p>Hurricane Irene produced torrential downpour rains that resulted in major flooding and a number of record breaking crests on area rivers, tropical storm force wind gusts, one confirmed tornado, and a 3- to 5-foot storm surge that caused moderate to severe tidal flooding with extensive beach erosion. This resulted in thousands of mandatory and voluntary evacuations along the coast and rivers from storm surge and freshwater flooding, and widespread power outages that lasted for up to two weeks in areas that were subsequently impacted by the remnant moisture from Tropical Storm Lee in September. Moderate tidal flooding occurred along the tidal Delaware River and Delaware Bay and minor to moderate flooding occurred farther north along the Delaware River. Moderate to severe tidal flooding occurred along the Atlantic Coast and Raritan Bay. Waves were estimated to reach as high as 12 feet and offshore seas reached 25 feet. The wind and flooding across the state forced the closure of approximately 350 main roadways in the State including sections of I-287, the Garden State Parkway, and the New Jersey Turnpike. There</p>







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>were six direct deaths associated with this storm, all drownings. Governor Christie declared a state of emergency for all of New Jersey.</p> <p>In Cape May County, there were mandatory evacuations throughout the county. Vertical cuts averaged two to four feet. In the City of Cape May, a horizontal dune cut occurred on Poverty Beach. The highest wind gusts during Irene ranged from 53 mph in Wildwood to 75 mph at the Cape May Ferry Terminal (Lower Township). The Cape May Lewes Ferry suspended service for two days. The County also experienced moderate tidal flooding, with a peak tide of 8.55 feet above mean lower low water in the City of Cape May. Rainfall totals in the County ranged from 4.9 inches in Stone Harbor to 8.59 inches in Cedar Springs. The County had approximately \$5.5 million in damages from this event.</p>
June 29-30, 2012	Thunderstorms (Derecho)	N/A	N/A	<p>A cluster of thunderstorms near Eldora moved into western Cape May County. Wind gusts from this event were estimated from 65 to 70 mph as it moved eastward. The strong winds resulted in significant tree and power line damage across the County. There was widespread damage across Cape May County, downing trees, large tree limbs, and power lines. Thousands of customers were without power, with some areas experiencing power outages for up to one week. Several municipalities opened cooling centers as temperatures were in the 90s the following week. The County had approximately \$750,000 in property damage.</p>
August 11, 2012	Thunderstorms and Flash Flooding	N/A	N/A	<p>A series of thunderstorms preceding an approaching cold front that coincided nearly exactly with the afternoon high tide produced flash flooding along coastal sections of Atlantic and Cape May Counties. Doppler Radar storm total estimates reached between 2.0 and 2.5 inches right along the immediate shore from Ocean City (Cape May County) northeast into Atlantic City (Atlantic County).</p> <p>Thunderstorms with torrential downpours caused flash flooding in Ocean City, Sea Isle City and Middle and Lower Townships. Widespread roadway flooding was reported, especially in Ocean City. The heavy rain coincided with the afternoon high tide. Event precipitation totals included 1.78 inches in Dennis Township and 1.70 inches in Middle Township.</p>
August 25-26, 2012	Thunderstorms and Flash Flooding	N/A	N/A	<p>A series of slow moving thunderstorms brought around 5 inches of rain and caused flash flooding in Cape May County. In Avalon and Cape May, vehicles were submerged in flood waters. In North Wildwood and Wildwood Crest, numerous streets were flooded. Some businesses in Wildwood were flooded. Overall, the County had approximately \$150,000 in property damage from this event.</p>
October 29, 2012	Hurricane Sandy	DR-4048	Yes	<p>Hurricane Sandy was the costliest natural disaster by far in the State of New Jersey. Record-breaking high tides and wave action combined with sustained winds as high as 60 to 70 mph with wind gusts as high as 80 to 90 mph to batter the State. Statewide, Sandy caused an estimated \$29.4 billion in damage, destroyed or significantly damaged 30,000 homes and businesses, affected 42,000 additional structures, and was responsible directly or indirectly for 38 deaths. A new temporary inlet formed in Mantaloking (Ocean County) where some homes were swept away. About 2.4 million households in the State lost power. It would take two weeks for power to be fully restored to homes and businesses that were inhabitable.</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>Overall, Sandy caused approximately \$30 billion in damages in New Jersey and caused 12 deaths in the State.</p> <p>In Cape May County, rainfall totals ranged from 3.53 inches at Dias Creek to 11.91 inches at Wildwood Crest. Peak wind gusts in the County ranged from 60 mph in Ocean City to 81 mph in Dennisville. The maximum water level for the County was in Cape May and measured at 8.91 feet MLLW and a storm surge of 3.51 feet was reported. The County had approximately \$175 million in damages from this event. The County and its municipalities received over \$40 million in obligated reimbursements for damage caused by Hurricane Sandy. Additionally, the County received \$1.24 million in HMGP funds for the energy allocation initiative generator projects. The County also received over \$2.3 million for HMGP local projects/county infrastructure projects. Over \$780,000 was received by FEMA elevation grants for nine properties in the County.</p>
July 12, 2013	Thunderstorms and Flash Flooding	N/A	N/A	<p>Bands of showers and thunderstorms with heavy rain associated with a low pressure system along the frontal boundary caused some poor drainage flooding in Mercer, Salem and Cumberland Counties and flash flooding in Cape May County. The heaviest rain fell during the afternoon in southern New Jersey and during the late afternoon and early evening in central New Jersey. Event precipitation totals averaged 1 to 2.5 inches in Mercer, Salem and Cumberland Counties as well as the northern half of Cape May County and 2.5 to 5.5 inches in the southern half of Cape May County.</p> <p>Showers and thunderstorms with torrential downpours caused poor drainage flash flooding in the southern third of Cape May County. Event precipitation totals included 5.60 inches in Green Creek, 5.51 inches in Erma, 3.83 inches in Cape May, 3.71 inches in Cape May Harbor and 3.12 inches in Wildwood Crest.</p>
July 10, 2014	Thunderstorms and Flash Flooding	N/A	N/A	<p>Thunderstorms with heavy rain caused flash flooding along the barrier islands of Cape May County starting on the morning of the 10th. In Ocean City, water was reported as high as 3 feet on some roadways with flooding up the entrance of some homes and businesses. Rainfall totals included 4.48 inches at Beesley's Point, 3.65 inches in Woodbine, 2.44 inches in Upper Township and 2.32 inches in Dennis Township.</p>
December 9, 2014	Nor'Easter and Flooding	N/A	N/A	<p>A strong Nor'Easter brought strong winds and minor to moderate tidal flooding the Upper Delaware Bay and around Raritan Bay. There was moderate tidal flooding in Lower Delaware Bay and Atlantic Coastal New Jersey. The storm also caused minor to moderate beach erosion. Peak wind gusts ranged from 45 to 55 mph and downed trees, limbs and power lines. Tidal flooding from this event impacted all of the coastal counties in New Jersey.</p> <p>In Cape May County, the highest tide was at the Cape May Ferry Terminal and was 7.78 feet above mean lower low water (moderate tidal flooding). Peak wind gusts of 46 mph was recorded at Cape May Harbor. In West Wildwood, the George Redding Bridge (State Route</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				47) was closed. In Ocean City, tidal flooding reached the doorways of businesses on West Avenue. Schools in the County were closed due to this event.
August 21, 2015	Heavy Rain and Flooding	N/A	N/A	Scattered showers and thunderstorms moved across southeastern Pennsylvania and into central and southern New Jersey. The thunderstorms were accompanied by heavy rainfall which led to areas of flash flooding. There was also isolated wind damage associated with this event. Rainfall totals ranged from two to five inches where flash flooding occurred.  In Cape May County, the storms moved across portions of the County and flash flooding was reported in the City of North Wildwood. Numerous streets in the City were flooded and impassable. Overall, rainfall totals in the County ranged from 2.61 inches in Middle Township to 3.03 inches in the City of North Wildwood.
October 5, 2015	Strong Winds and Rain	N/A	N/A	There were reports of moderate to severe beach erosion up and down the New Jersey coastline with the worst hit areas in Atlantic and Cape May Counties. On some beaches, the dunes were partially to completely washed away. There were numerous road closures. In Cape May County, a vacant house fell into flood waters after the structure was weakened. Tides reached 8.19 feet in North Wildwood. Wind gusts of 62 mph. The storm carved eight foot high cliffs in the dunes.

Source: FEMA 2015; NCDC 2015; NWS 2015; SPC 2015; NJ HMP 2014  
 DR Disaster Declaration (FEMA)  
 FEMA Federal Emergency Management Agency  
 Mph miles per hour  
 N/A Not Applicable  
 NCDC National Climatic Data Center  
 NHC National Hurricane Center  
 NJ New Jersey  
 NOAA National Oceanic and Atmospheric Administration  
 NWS National Weather Service

### E.2.6 Severe Winter Weather

Table E-5. Severe Winter Weather Hazard Events in Cape May County, 2009 to 2016

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
December 19-20, 2009	Winter Storm and Nor'Easter	N/A	N/A	A Nor'Easter brought heavy snow throughout New Jersey and produced strong gusty winds along the coastline. The heaviest snow fell along and





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				<p>east of the Interstate 95 corridor. Snowfall totals ranged from 3 inches in Sussex County to 24 inches across central and southern New Jersey. In addition to the snow and wind, the storm also led to minor tidal flooding in Atlantic and Cape May Counties.</p> <p>In Cape May County, the storm caused service interruptions on the 19th and 20th on the Cape May/Lewes Ferry. About 3,000 homes and businesses were without power in the County, with Ocean City being the hardest hit. The 9th Street Bridge was closed until the 21st in Ocean City because a tugboat broke free from its moorings and crashed against the bridge. The morning high tide on the 19th forced the closure of three bridges in Cape May County: The George Redding Bridge into Wildwood, The Townsend's Inlet Bridge between Avalon and Sea Isle City and the Beesleys Point Bridge between Upper Township and Somers Point. Snowfall totals in the County ranged from 1.5 inches in Scotch Bonnet (Borough of Stone Harbor) to 18.3 inches in Eldora (Dennis Township).</p>
February 5-6, 2010	Blizzard	DR-1889	No	<p>A major winter storm dropped 20 to 30 inches of snow across the southern third of New Jersey, 10 to 20 inches across the central third of New Jersey and less than 10 inches of snow north of Interstate 78 in the northern third of New Jersey. State of emergencies were declared throughout the State.</p> <p>A travel ban was in effect in Atlantic and Cape May Counties. Approximately 100,000 homes and businesses were without power in New Jersey, with a bulk of the outages reported in Atlantic and Cape May Counties. Overall, the impacted areas had approximately \$50 million in property damage.</p> <p>Cape May County was the hardest hit as the snow combined with blizzard winds which downed trees and poles. About 70,000 homes and businesses were without power; numerous shelters were opened. Snowfall totals ranged from 11 inches in northern Villas (Lower Township) to 21.8 inches in the Borough of West Cape May. Peak wind gusts ranged from 35 mph in the Borough of Woodbine to 50 mph in the City of Cape May.</p>
February 9-11, 2010	Winter Storm (Nor'Easter)	N/A	N/A	<p>This was the second winter storm within a week. Blizzard conditions occurred at times across the extreme southern portion of the State of New Jersey. Snowfall totals averaged seven to 15 inches across northwest New Jersey, 12 to 20 inches across central New Jersey and six to 12 inches across the southern portion. Snowfall totals in Cape May County ranged from three inches in Ocean City to 7.1 inches in the City of Cape May. Overall, there was approximately \$500,000 in damages in the State.</p>
December 26-27, 2010	Severe Winter Storm and Snowstorm	DR-1954	Yes	<p>A strong Nor'Easter impacted the mid-Atlantic region between December 26<sup>th</sup> and December 27<sup>th</sup>. This storm brought heavy bands of snow and</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
	(Nor'Easter)			<p>strong winds across New Jersey, with snowfall totals ranging from 18 to 24 inches. Wind gusts of up to 61 mph were recorded in the coastal areas of the State. Portions of the Garden State Parkway were shutdown with hundreds of cars left stranded. Snow drifts reached 8 to 9 feet in some locations and turned a once clear, plowed road, into an impassable piece of asphalt. A state of emergency was declared for New Jersey. Snow totals in Cape May County ranged from 13 inches in Beesley's Point (Upper Township) to 26.5 inches in Dennisville (Dennis Township). Peak wind gust of 50 mph was recorded in the City of Cape May and 59 mph was recorded in the Borough of West Cape May.</p>
January 3, 2014	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought five to nine inches of snow across most of New Jersey and about 10 inches in northern Ocean County and in Monmouth County. This caused hazardous travel conditions. Governor Christie declared a state of emergency in New Jersey. There were numerous school, government and business closures. Warming centers were opened. Overall snow totals ranged from 5.5 inches in Morris and Warren counties to 10.7 inches in Monmouth County. Wind gusts ranged from 40 mph in Monmouth County to 52 mph in Cape May County.</p> <p>In Cape May County, snowfall totals ranged from eight to nine inches. Peak wind gusts of 52 mph was measured in Cape May City. Tidal flooding also impacted Cape May County which left many roadways icy due to the low temperatures that occurred on the 3rd. Moderate tidal flooding occurred in the County; high tide reached 7.27 feet above MLLW at the City of Cape May.</p>
January 26, 2015	Winter Storm / Coastal Flooding	N/A	N/A	<p>A winter storm brought heavy snow and minor tidal flooding to parts of New Jersey. Snowfall in northwest New Jersey averaged one to five inches. A state of emergency was declared and a driving ban was enacted. Trains and ferries were operating on a modified schedule. There was minor coastal flooding during the high tide cycle during the predawn hours of the 27th, as well as some beach erosion. Snow began falling in the state during the early morning on the 26th. Precipitation started falling as rain in the southern half of the state before it turned over to snow. Overall snowfall totals across New Jersey ranged from 0.9 inches in Cumberland County to 12 inches in Monmouth County.</p> <p>In addition to snowfall, the storm system caused minor tidal flooding during the early morning high tide cycle on the 27th. The highest tide was reported at Sandy Hook (Monmouth County) which reached 7.17 feet above MLLW. In Cape May County, the highest tide at Cape May Ferry</p>





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				Terminal (City of Cape May) was 7.05 feet above MLLW (minor tidal flooding threshold is 6.70 feet above MLWW). Other locations in the County experienced tidal flooding as well and included the following: Ocean City (6.12 feet above MLLW), Borough of Avalon (6.22 feet above MLLW), Borough of Stone Harbor (6.66 feet above MLLW), and Cape May Harbor (6.53 feet above MLLW).
January 22-24, 2016	Winter Storm & Coastal Flooding (Winter Storm Jonas)	DR-4264	Yes	<p>Snow began to develop on January 22<sup>nd</sup> from south to north. Across the coastal regions, the snow changed over to rain which limited the totals for those areas. There were intense bands of snow with rates of two to four inches per hour in north-central New Jersey and the Lehigh Valley in Pennsylvania. In addition to snow, there were strong wind gusts that topped out between 30 and 50 mph for most of the region. At the airports, most flights were cancelled due to the storm. Travel became nearly impossible at times for most of the areas impacted. Moderate to major tidal flooding occurred along the New Jersey and Delaware beaches which resulted in severe beach erosion and some property damage in coastal communities. Snowfall totals ranged from two to 32 inches, with the highest totals from Berks, Pennsylvania northwest to Allentown (Pennsylvania) and then into north-central New Jersey.</p> <p>In Cape May County, snowfall totals ranged from seven inches in the City of Cape May to 11.3 inches in Wildwood Crest. Peak wind gusts ranged from 50 mph in Cape May Point to 64 mph in Strathmere. In addition to snow and wind, coastal flooding impacted the county. In Cape May, there was a record storm surge of 9.4 feet. The tides in the County were as high as 10 feet in some parts which flooded garages and ground floors of buildings. Flood damage was significant as water levels exceeded those observed during Sandy and ranked in the top 10 on record. Beach erosion was moderate to major. Major tidal flooding was reported at the Cape May tide gage – 8.98 feet above MLLW was recorded at 1:30pm on January 23<sup>rd</sup> (major tidal flooding starts at 8.7 feet above MLLW).</p>
February 8-10, 2016	Nor'Easter & Coastal Flooding	N/A	N/A	A powerful Nor'Easter brought blizzard conditions to eastern Long Island and southeast New England and brought strong winds, rain and snow to the southern half of New Jersey. In Cape May County, snowfall totals were a minimum (0.2 inches in Middle Township and 0.6 inches in Cape May City). However, flooding was an issue in the County. The NWS issued a coastal flood warning for the county. During high tide, numerous streams were flooded and had to be closed. Moderate coastal flooding was reported at the Cape May tide gage – 8.159 feet above MLLW was





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				recorded at 1:54pm on February 9 <sup>th</sup> (moderate tidal flooding starts at 7.7 feet above MLLW).

Source(s): NOAA NCDC 2016; NWS 2016; FEMA 2016

- FEMA Federal Emergency Management Agency
- MLLW Mean Lower Low Water
- Mph Miles per hour
- NCDC National Climatic Data Center
- NOAA National Oceanic and Atmospheric Administration
- NWS National Weather Service
- N/A Not Applicable





E.2.7 Tsunami

Table E-6. Tsunami Events in Cape May County, 1821 to 2016

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
September 3, 1821	Ocean Withdrew	N/A	N/A	A large wave carried a man six miles inland in Cape May County.
September 8, 1889	High Waves	N/A	N/A	Occurred during the Mudhen Hurricane. Unusually high waves were reported on September 8th and 10th in the Mid-Atlantic coast, including Asbury Park, Atlantic City, Sea Isle City, Coney Island, Long Island, Staten Island and other exposed points. It was suggested that this event was a “tsunamic hurricane”. There was no evidence that the waves were a true tsunami.
August 19, 1931	High Waves	N/A	N/A	There was a sudden and brief onset of three meter waves in Atlantic City. The waves arrived at high tide. Four runups were reported in Atlantic City, Point Pleasant, Wildwood and Long Island. Three deaths were reported in New Jersey due to drownings from these high waves. One of deaths occurred in Wildwood, New Jersey. In other areas of the region, high waves were also reported. It was believed these waves were most likely due to a tropical storm north of Puerto Rico.
September 21, 1938	High Waves	N/A	N/A	This event was a very doubtful tsunami event. Wave action could have been attributed to the storm surge of a Category 3 “The Long Island Express” hurricane. There were storm surges of 10 to 12 feet. Based on USGS research, the waves were hurricane-induced. These waves caused damaged over the New Jersey coast, including Cape May County.
September 14, 1944	High Waves	N/A	N/A	This event was a very doubtful tsunami. Wave action could have been attributed to the storm surge of the Category 3 “The Great Atlantic Hurricane”. It traveled up the east coast of the U.S. causing damage along the way. Overall, the hurricane caused 46 deaths and \$100 million in damage in the U.S.; and it sank five ships and caused 344 deaths at sea. A theory was made that there was an offshore landslide or slump from an earthquake that occurred on September 5th in upstate New York and may have caused these waves as well.  In Cape May County, a wave of nearly 40 feet in height was observed. In the City of Cape May, the two mile long boardwalk was destroyed in a matter of minutes. In the City of Sea Isle City, 25 houses were washed off their foundations. Between the City and Strathmere, more than 100 bungalows were washed into the channel. In the City of Cape May, Beach Drive was washed out and was buried under sand and debris.
May 19, 1964	High Waves	N/A	N/A	A disturbance that most likely originated near the northeastern end of Long Island was recorded from Providence, Rhode Island to New Jersey. Wave activity continued for over eight hours. The source of the waves was unknown. There were no reports of recordings at seismic stations and the waves did not appear to be of meteorological origin. A submarine landslide or explosions were the possible causes.







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
June 13, 2013	Tsunami Runup	N/A	N/A	<p>Tsunami-like waves were observed along the east coast of the United States after a tsunami was reported in the northwestern Atlantic Ocean. A large wave in Cape May County was observed, approximately six feet and spanned across the Barnegat Inlet. According to NOAA, the wave occurred in conjunction with a reversal of the current such that even though the tide was going out, a strong surge was entering the inlet. This surge carried the divers back over the submerged reef and into the inlet from where they were picked up. On the south jetty three people were swept off the rocks which were 5 to 6 feet above sea level at the time. At least two were injured requiring medical treatment. There was no more strong activity after about 5 minutes.</p>

Source: NOAA-NCEI 2014

FEMA Federal Emergency Management Agency

NOAA National Oceanic and Atmospheric Administration





**E.2.8 Wildfire**

**Table E-7. Wildfire Events in Cape May County, 1831 to 2016**

Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
January 14-16, 1831	Snowstorm	N/A	N/A	Cape May County reportedly received over three feet of snow.
March 11-14, 1888	Blizzard (Blizzard of '88 or "Great White Hurricane")	N/A	N/A	\$25 M nationwide in fire losses. Cape May County received between 10 and 20 inches of snow during this blizzard.
February 12-14, 1899	Blizzard	N/A	N/A	Cape May County received between 20 and 40 inches of snow. The City of Cape May recorded 34 inches (86 cm) of snow, which is the highest single storm snowfall total ever in New Jersey, in what is normally the least snowy part of the state. At the City of Cape May, the ocean was reported as being a massive sheet of ice.
December 10-11, 1904	Snowstorm	N/A	N/A	The City of Cape May received 12 inches of snow during a two-day period.
January 24-25, 1908	Snowstorm	N/A	N/A	The City of Cape May received between 20 and 22 inches of snow during a two-day period.
January 27-29, 1922	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
January 30, 1928	Extreme Cold	N/A	N/A	Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -8°F.
February 17, 1930	Extreme Cold	N/A	N/A	Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -8 °F
February 9, 1934	Extreme Cold	N/A	N/A	Record temperature for the month of February were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -13 °F
February 28, to March 1, 1934	Extreme Cold	N/A	N/A	Cold temperature were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -12 °F
November 26-29, 1938	Extreme Cold	N/A	N/A	Record temperatures for the month of November were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: 6 °F
January 24, 1940	Snowstorm	N/A	N/A	Belleplain State Forest, in the Borough of Woodbine, received 10 inches of snow.
March 1-2, 1941	Snowstorm	N/A	N/A	Belleplain State Forest, in the Borough of Woodbine, received 14 inches of snow over a two-day period.
January 11-12, 1942	Extreme Cold	N/A	N/A	Record temperature for the month of January were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				and Tuckahoe in the Township of Upper and the Borough of Woodbine: -11 to -22 °F
December 28, 1950	Extreme Cold	N/A	N/A	Record temperatures for the month of December in the City of Ocean City: -7°F.
March 1, 1952	Snowstorm	N/A	N/A	Belleplain State Forest, in the Borough of Woodbine, received 10 inches of snow.
December 11-13, 1960	Snowstorm	N/A	N/A	Cape May County suffered two fatalities from this storm and received between 1 and 20 inches of snow during this storm.
January 18-21, 1961	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
January 22, 1961	Extreme Cold	N/A	N/A	Cold temperatures were reported at the City of Ocean City: -8°F
February 10, 1967	Snowstorm	N/A	N/A	Belleplain State Forest, in the Borough of Woodbine, received 14 inches of snow.
January 11-14, 1964	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
Snowstorm November 12, 1968	Snowstorm	N/A	N/A	Cape May County experienced approximately \$238 K in property damages.
February 1-2, 1971	Extreme Cold	N/A	N/A	Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -5 to -9 °F
December 16, 1973	Snowstorm	N/A	N/A	Cape May County experienced approximately \$24 K in property damages.
March 29, 1974	Snowstorm	N/A	N/A	Cape May County suffered seven fatalities from this storm.
January 16-18, 1977	Extreme Cold	N/A	N/A	Record temperatures for the month of January were reported in the City of Ocean City: -4 to -10°F
February 5-7, 1978	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
February 10-18, 1979	Extreme Cold	N/A	N/A	Record temperatures for the month of February were reported in the City of Ocean City: 10 to -11 °F. Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -8 to -9 °F
February 17-19, 1979	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
December 26, 1980	Extreme Cold	N/A	N/A	Record temperatures for the month of December were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -9 °F.
January 13, 1981	Extreme Cold	N/A	N/A	Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -11°F.
January 8-13, 1981	Extreme Cold	N/A	N/A	Cold temperatures were reported in the City of Ocean City: 2 to -6°F
January 17-18, 1982	Extreme Cold	N/A	N/A	Record temperatures for the month of January were reported at the City of Cape May, Borough of Cape May Point, Township of Middle, Borough of Stone Harbor and the City of Wildwood: -2 °F. Cold temperatures were reported at the Borough of





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -11 to -14 °F.
February 10-12, 1983	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
December 24-26, 1983	Extreme Cold	N/A	N/A	Record temperatures for the month of December were reported at the City of Cape May, Borough of Cape May Point, Township of Middle, Borough of Stone Harbor, City of Ocean City and City of Wildwood: 6 to -2 °F.
January 20-21, 1985	Extreme Cold	N/A	N/A	Cold temperatures were reported in the City of Ocean City: -4 to -9°F
January 26-27, 1987	Winter Storm	N/A	N/A	Cape May County received between 10 and 20 inches of snow during this storm.
January 27-28, 1987	Extreme Cold	N/A	N/A	Cold temperatures were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -1 to -9°F.
February 9, 1987	Snowstorm	N/A	N/A	The City of Cape May received 10 inches of snow and opened its civic center as a winter shelter for the first time.
March 12-15, 1993	Blizzard “The Storm of the Century” (FEMA EM-3106)	N/A	N/A	This storm is listed as a top billion dollar weather disaster storm, impacting 26 states and resulted in approximately \$3 B in damages. FEMA declared an EM in 17 states, including New Jersey. \$2.6 M in assistance designated for snow plowing activities (includes 25-percent state share). Cape May County received between three and nine inches of snow.
January 20-21, 1994	Extreme Cold	N/A	N/A	Cold temperature were reported at the Borough of Avalon, South Dennis (Township of Dennis), the City of Sea Isle City, Strathmere and Tuckahoe in the Township of Upper and the Borough of Woodbine: -5°F.
February 6, 1995	Extreme Cold	N/A	N/A	Temperatures were in single digits throughout the southern counties of New Jersey.
December 9-12, 1995	Extreme Cold	N/A	N/A	Low temperatures the mornings of the 10 <sup>th</sup> through the 12 <sup>th</sup> were mainly in the teens in southern New Jersey.
January 6-8, 1996	Blizzard / Extreme Cold	FEMA DR-1088	N/A	This storm affected all counties of the State, resulting in a declared State of Emergency. Snowfall amounts within the State ranged from 30 inches in southern interior sections to 14 inches in coastal areas. \$41.96 M in federal assistance was provided to New Jersey, designated for snow plowing activities (includes 25-percent State share). Cape May County received between 10 and 18 inches of snow and experienced approximately \$800 K in property damages. The tide reached 8.5 feet above mean low water in Cape May County.
February 2-3, 1996	Snowstorm	N/A	N/A	Snow accumulations were greatest in southern New Jersey. Cape May County received between nine and 15 inches of snow during this storm.
February 4-7, 1996	Extreme Cold	N/A	N/A	Cold temperatures in the City of Ocean City: 2 to -8°F





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
February 16-17, 1996	Snowstorm	N/A	N/A	Cape May County received between three and nine inches of snow during this storm.
April 9-10, 1996	Snowstorm	N/A	N/A	Cape May County received between three and nine inches of snow during this storm. The Borough of Cape May Point received the most amount of snow averaging 7.8 inches.
January 20-21, 2000	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, ranging from three to six inches.
January 25, 2000	Winter Storm / Flooding	N/A	N/A	The winter storm caused major tidal flooding and erosion throughout the County. Snow accumulations in the county included 10 inches in the City of North Wildwood, 8.5 inches in the City of Cape May and 8 inches in Cape May Court House (Township of Middle). Tides reached 8.5 feet above mean low water in the City of Cape May.
February 22, 2001	Heavy Snow	N/A	N/A	In Cape May County snow accumulations included 7.9 inches in the City of Cape May, seven inches in the Township of Dennis, six inches in the City of North Wildwood and five inches in the City of Ocean City.
January 19, 2002	Winter Weather	N/A	N/A	A fatal car accident occurred in Cape May County as a result of snowy conditions.
December 5, 2002	Winter Storm	N/A	N/A	Minor snow accumulations throughout Cape May County, including six inches in the Borough of Woodbine, five inches at the Cape May Court House (Township of Middle) and three inches in the City of Ocean City.
January 14-29, 2003	Extreme Cold	N/A	N/A	Along coastal New Jersey (Ocean, Cumberland, Cape May and Atlantic Counties), homeowners' pipes were bursting and included vacant summer homes which were not properly winterized. The Cape May-Lewes Ferry service was reduced to one working vessel because of the ice in Delaware Bay.
January 16-17, 2003	Winter Weather / Mix	N/A	N/A	The heaviest snow fell in Cape May County. Specific accumulations (all in Cape May County) were 4.1 inches in City of Cape May, 3.0 inches at the Cape May Ferry Terminal (City of Cape May), 2.8 inches in Green Creek (Township of Middle) and 2.0 inches in City of Ocean City.
February 6-7, 2003	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including six inches in Borough of Avalon and Seaville (Borough of Woodbine), five inches in the Borough of Woodbine and 4.3 inches in the City of Ocean City.
February 17-18, 2003	Snowstorm "President's Day Storm"	FEMA EM-3181	Yes	This storm caused 20 deaths nationwide, and affected all counties of New Jersey. A State of Emergency was declared for New Jersey as a result of over a foot of snow. \$30 M was spent on cleaning roads which led to \$6 M in reimbursements to the New Jersey Department of Transportation (NJDOT) for their services. Cape May County received between 10 and 20 inches of snow and experienced approximately \$1.4 M in property damages. The City of Cape May received between 18.8 and 21.5 inches of snow. Moderate tidal flooding and moderate to locally severe beach erosion was identified throughout Cape May County. The high tide in the City of Wildwood





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				reached 8.69 feet above mean lower low water; 8.16 feet at the City of Cape May; and 8.06 feet at the Borough of Stone Harbor.
January 9-11, 2004	Extreme Cold	N/A	N/A	Low temperatures in Cape May County included 0°F in the Borough of Woodbine and 8 °F in the City of Cape May.
January 15-16, 2004	Extreme Cold	N/A	N/A	Low temperatures in Cape May County included 9°F in the Borough of Woodbine.
January 25-26, 2004	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including 5.5 inches in the Borough of Woodbine, 5.3 inches in Cape May Court House (Township of Middle), 4.5 inches in Borough of Avalon, and 4.2 inches in the City of Cape May.
February 17-18, 2004	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including 5 inches in Green Creek (Township of Middle) and Cold Spring (Township of Lower), and 4.8 inches in Dias Creek.
December 20, 2004	Extreme Cold	N/A	N/A	Low temperatures in Cape May County included 12°F in the City of Wildwood.
January 22-23, 2005	Snowstorm	N/A	N/A	Cape May County received between one and four inches of snow during this storm.
January 28, 2005	Extreme Cold	N/A	N/A	Low temperatures in Cape May County included 9°F in the City of Wildwood.
February 24-25, 2005	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including 7.3 inches in South Seaville (Borough of Woodbine) and 7.0 inches in Cape May Court House (Township of Middle).
December 5-6, 2005	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including 5.0 inches in the City of North Wildwood and 4.8 inches in Seaville (Borough of Woodbine) and Eldora (Township of Dennis).
January 14-15, 2006	Snowstorm	N/A	N/A	Cape May County received between two and six inches of snow during this storm.
February 11-13, 2006	Snowstorm	N/A	N/A	Minor snow accumulations throughout Cape May County, including 5.0 inches in Eldora (Township of Dennis) and 3.8 inches in the Borough of Woodbine.
March 7-8, 2007	Extreme Cold	N/A	N/A	Record temperatures for the month of March were reported in the City of Ocean City: 4 to 11°F.
Snowstorm March 1-2, 2009	Snowstorm	N/A	N/A	Snow accumulations in Cape May County included 10.5 inches in Eldora (Township of Dennis), 10.2 inches in Dennisville (Township of Dennis), 9.5 inches in Seaville (Borough of Woodbine), and 9.3 inches in the Borough of Woodbine. Caused many school closing throughout the County and closed many businesses and government offices.
November 11-14, 2009	Nor'Easter and Remnants of Tropical Storm Ida	FEMA DR-1867	Yes	FEMA declared a major disaster for Atlantic and Cape May Counties in New Jersey after the area was struck by severe storms and flooding associated with Tropical Depression Ida and a Nor'Easter. Damage estimates for a few coastal towns of New Jersey reached nearly \$100 million. Cape May County declared a state of emergency. Wind gusts reached up to 50 mph along the southern New Jersey coast. The Township of Lower had 50 consecutive hours of sustained wind over 39 mph with gusts reaching approximately 57 mph. Rainfall totals for Cape May County





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
				ranged between 1.70 inches and 2.69 inches. Peak wind gusts in the County ranged between 35 and 57 mph.
February 5-6, 2010	Severe Winter Storm and Snowstorm	(FEMA DR-1889)	Yes	Significant snow accumulations were measured across the Delmarva, southern New Jersey and southeastern Pennsylvania, with snow fall rates of one and two inches an hour. Strong, gusty winds were also recorded with this storm. Up to 28 inches of snow fell in southern New Jersey. In Cape May County, from the City of Ocean City to the Borough of Cape May, tidal flooding occurred along the shore. Several roads were closed due to snow drifts and flooding. On February 5th, Cape May County declared a state of emergency. All municipalities were all designated disaster areas. Snowfall totals for the County ranged between 11 inches and 21.8 inches.
April 20-22, 1963	Wildfire	N/A	N/A	Series of 37 wildfires burned 193,000 acres, 186 homes and 197 buildings destroyed, 7 fatalities, \$8.5 M in property damages, one fire burned 76,000 acres and traveled 21 miles from New Lisbon to the Garden State Parkway In Cape May County, the fires caused approximately \$15 K in property damage.
2001	Wildfire	N/A	N/A	Airport Fire – 765-acre fire, 60 homes evacuated
January 24, 2009	Brush Fire	N/A	N/A	Structure fire and one-acre brush fire in Erma (Lower Township)
April 17, 2009	Brush Fire	N/A	N/A	A brush fire was reported on Ludlam Avenue in Erma (Lower Township)
May 22, 2009	Brush Fire	N/A	N/A	A brush fire was reported at the George Reading Bridge in Erma (Lower Township).
June 27, 2009	Brush Fire	N/A	N/A	A brush fire was reported at the George Reading Bridge in Erma (Lower Township).
March 20, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Tecumseh Circle in Erma (Lower Township).
April 11, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Route 9 and Kathryn Boulevard in Erma (Lower Township)
June 17, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Seashore Road in Erma (Lower Township)
June 18, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Shawcrest Island in Erma (Lower Township)
July 1, 2010	Brush Fire	N/A	N/A	A brush fire was reported along the Garden State Parkway in Erma (Lower Township)
July 5, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Lake Laurie in Erma (Lower Township)
November 18, 2010	Brush Fire	N/A	N/A	A brush fire was reported at Bennetts Crossing in Erma (Lower Township)
February 19, 2011	Wildfire	N/A	N/A	The combination of strong west to northwest winds, low humidity levels, and dry weather helped lead to the rapid spread of wildfires across the State of New Jersey. Overall, 10 wildfires were reported in the State. In Cape May County, a wildfire was reported in Dennis Township and it took six fire departments two hours to contain the fire. It started near a shed, which was destroyed, and spread into nearby brush. There was approximately \$10,000 in property damage from this wildfire event.





Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
April 3, 2011	Brush Fire	N/A	N/A	A brush fire in the woods near Dennis Township Primary School on Hagen Road was reported. A fire truck from the Dennis Township Fire Department and several NJFFS units were utilized to extinguish the fire.
April 20, 2011	Brush Fire	N/A	N/A	A brush fire was reported at mile mark 0 on the Garden State Parkway and Route 109 in Erma (Lower Township)
April 27, 2011	Brush Fire	N/A	N/A	A brush fire was reported at the intersection of Ocean Drive and 2 Mile Dock Road in Erma (Lower Township).
May 11, 2011	Brush Fire	N/A	N/A	A brush fire was reported at Seashore Road in Erma (Lower Township).
June 5, 2011	Brush Fire	N/A	N/A	A brush fire was reported at Weeks Landing Road in Erma (Lower Township).
June 29, 2011	Brush Fire	N/A	N/A	A brush fire was reported at Shunpike and Clary Court in Erma (Lower Township).
July 15, 2011	Brush Fire	N/A	N/A	A brush fire was reported on Route 47 in the area of Bridge in Erma (Lower Township).
August 27, 2011	Brush Fire	N/A	N/A	A brush fire was reported on Ocean Drive, just east of Canyon Club in Erma (Lower Township).
August 30, 2011	Brush Fire	N/A	N/A	A brush fire was reported at mile mark 0.5 south on the Garden State Parkway in Erma (Lower Township).
March 7, 2012	Brush Fire	N/A	N/A	A brush fire was reported at the intersection of Cresse Avenue and the Garden State Parkway in Erma (Lower Township).
April 2012	Wildfires	N/A	N/A	The NWS implemented a fire warning for all of New Jersey and Delaware and portions of Maryland, Pennsylvania, and New York. There were more than two dozen brush/wildfires across the State in a matter of a week. Several wildfires occurred in Cape May County.
April 25, 2012	Brush Fire	N/A	N/A	A brush fire was reported at the intersection of Garden State Parkway and Weeks Landing Road in Erma (Lower Township).
July 27, 2012	Brush Fire	N/A	N/A	A brush fire was reported in the area of Ocean Drive near Canyon Club in Erma (Lower Township).
April 22, 2013	Brush/Grass Fire	N/A	N/A	A brush/grass fire was reported on Erma Lane Erma (Lower Township).
April 27, 2013	Brush Fire	N/A	N/A	A large brush fire on the 27th forced the closure of Ferry Road near the terminal of the Cape May-Lewes Ferry in West Cape May. Little if any rain fell during the preceding week in Cape May County.
July 30, 2013	Brush Fire	N/A	N/A	A small brush fire was reported off of Fulling Mil Road in Erma (Lower Township).
September 18, 2013	Brush Fire	N/A	N/A	A brush fire on the Garden State Parkway southbound was reported in Lower Township, south of Exit 4 (NJ 47).
October 18, 2013	Brush Fire	N/A	N/A	A brush fire was reported on Ocean Drive in Erma (Lower Township).
March 14, 2014	Brush Fire	N/A	N/A	A brush fire was reported on Saxon Avenue in Erma (Lower Township).
May 4, 2015	Brush Fire	N/A	N/A	A brush fire was reported in the vicinity of the Garden State Parkway and North Wildwood Boulevard in Cape May Courthouse (Middle Township).







Date(s) of Event	Event Type	FEMA Declaration Number (if applicable)	Cape May County Designated?	Description
June 20, 2015	Brush Fire	N/A	N/A	A brush was reported in Cape May Courthouse (Middle Township) behind Catalina Motel.
January 3, 2016	Brush Fire	N/A	N/A	A brush fire was reported in West Cape May at Sixth Avenue.

Source: NOAA 2016

FEMA Federal Emergency Management Agency

NOAA National Oceanic and Atmospheric Administration

