

Virginia Hurricane History by David Roth Hydrometeorological Prediction Center Camp Springs, MD & Hugh Cobb N.W.S. Forecast Office Wakefield, VA

Early Twentieth Century

October 13-14, 1900: The six-masted schooner *Wells*, proclaimed as "the only of her kind in the world" sought shelter from the gale in Norfolk, with a 5000 ton cargo of coal.

July 10-11, 1901: On the 10th, northerly gales commenced from Cape Hatteras to Henry. Winds averaged 50 mph at Cape Henry that night, which downed lines. A severe thunderstorm in Richmond, on the western fringe of this storm, claimed a victim when lightning struck a tree in her yard. In Berryville, heavy rains and winds did great damage to crops as it leveled trees and stripped off fruit during the cyclone. A barn was struck by lightning, instantly setting it ablaze (\$2000). Artillery practice in the Chesapeake Bay was interrupted as high winds wrecked floating targets.

September 16-18, 1901: A "terrific northeaster" prevailed along the coast. Four men off Ocean View drowned after setting sail during the storm. Newport News reported 3.32" of rain, which set a 24-hour rainfall record for the month of September. The schooner *Joseph J. Pharo* went down 1 ½ miles south southeast of Assateague Beach on the 16th. By the 17th, the schooner *Edith G. Folwell* wrecked one mile north of Cape Henry. The sloop *Dude* capsized off Sewells Point. Those aboard clung to the wreck and were rescued and taken to Cape Charles. The schooner *Idle Times*, while in Chesapeake Bay, was "run down" by a Pennsylvania railroad barge that was in tow, killing the schooner's captain.

In Maryland, Braddock experienced significant damage leaving few homes, barns, or outbuildings untouched. Poplar Terrace was damaged as a water tank was swept off the house. Nearly 300 window panes were destroyed by the wind there. Two horses perished. Montevue hospital's roof was partially torn off as 1500 windows were demolished. At Liberty, twelve barns overturned. Growing corn was in ruin.

June 14-16, 1902: On the 14th, the steamer *Falcon* fell victim to the storm two miles southeast of False Cape. Twenty-four hour rainfall records were set for the month of June during this cyclone at New Canton (3.70") and Fredericksburg (3.45") on the 16th. The deluge broke a drought, benefitting tobacco crops most.

September 15-17, 1903: This deadly hurricane struck the New Jersey shore. It was considered the worst storm in forty years at Ocean City, MD. Salisbury saw several schooners break from their moorings, smashing themselves downstream. President Theodore Roosevelt experienced the hurricane firsthand while aboard the naval yacht *Sylph*, as winds increased to 65 mph in Long Island sound. Other than a drenching, all aboard fared well. At the Delaware Capes, 80-mph winds lashed the schooner *Hattie A. Marsh*, dashing the vessel upon the rocky shore; five perished. The torpedo boat destroyer *Lawrence* took on a foot of water while fighting the storm from Atlantic City to Norfolk. In Virginia, a strange scene unfolded. As the cyclone passed northeast of Old Point Comfort, a shower of dead birds, most feathers plucked off by the wind, fell

from the sky. Hundreds of birds, about the size of a wren, were downed around Old Point Comfort. The foremast of a schooner was claimed by a squall near Cape Henry around 3:30 a.m. the 17th. A few small craft were thrown ashore. The fishing schooner *Beatrice* disappeared into the cyclone several miles north of Chincoteague with a crew of 30 (\$25,000). In the District of Columbia, heavy rains washed out a baseball game between the Washington Senators and the Detroit Tigers. Strong west winds accompanied the deluge as it flooded the field.

October 8-10, 1903: Cape Henry saw winds over five minutes average 74 mph with a tropical system that became nontropical off the Outer Banks of North Carolina. Norfolk's tide rose to 9 feet above mean lower low water. In Norfolk, a tree brought from the grave of Napoleon Bonaparte to the city was uprooted; it was one of most historic features of the city at the time. Plate glass windows shattered in the wind. Communication was wiped out as wind knocked down wires and cables. It was the worst storm in 15 years, as rain and wind plagued the city for over 48 hours.

At Richmond, a "furious wind storm" descended upon the city the morning of the 9th, accompanied by a 20 degree fall in temperature. Trees were uprooted and communications were "disturbed" in the state capital. An elderly man in Leesburg drowned while trying to cross over Little River on a log.

The coast of the Old Dominion was strewn with wreckage from Cape Henry to Dam Neck Mills on the 10th. Fourteen foot high waves battered the Back River lighthouse; stones from the light were moved out of place. It took 72 hours of continuous work to save the light, its house, and the walkway (Vojtech). The cruiser *Olympia*, in dry dock at Norfolk, saw the tide reach just six inches from the top of the outer edge of its caisson. Terminal piers of the Norfolk & Western and the Southern & Atlantic Coast lines were badly damaged. The Ocean View pleasure pier was wrecked.

At the nation's capital, the grain mill and elevator of S.S. Dalsh & Co., located on Florida Avenue, burst into flame during the storm at 11 a.m. on the 10th, leading to a \$90,000 loss. Another fire at a stable along Jackson Street Northeast was entirely destroyed, its two horses perished (\$400). A fierce gale blew throughout the 9th during the Columbia Golf tournament. It took more than two hours to go through the rounds.

Two men drowning off Virginia Beach were rescued by a member of the Cape Henry Life-Saving Station, earning him a Gold Life-Saving Medal (Pouliot). The Assateague Beach life savers rescued eight fishermen when their home was swept away by high waters. The Wachapreague Life Station was abandoned when it was becoming submerged by the storm surge. High water threatened other dwellings at False Cape.

In the Lower Chesapeake, two three-masted schooners were blown ashore on the 9th. The tug *Richmond* was battling a northeast gale by late on the evening of the 8th. The schooner barge *Georgia* parted cables and drifted ashore near the Virginia Beach Life-Saving Station. Hurricane-force winds took their toll on the schooner barge *Ocean Belle*, before its cables broke at 10:30 a.m. on the 10th. The schooner landed broadside on the beach before immediately breaking up in the dangerous waves. Two perished. The *Nellie W. Howlett* sank three miles south of the Dam Neck Mills Station. In all, nine ships had mishaps offshore the Old Dominion. Three perished. As the cyclone moved north, rains amounting to ten inches drowned New York City. Damage was experienced up the coast to Block Island.

September 14-15, 1904: This storm made landfall in eastern South Carolina before moving north and northeast to pass offshore as a nontropical low near Norfolk. Ashland recorded 3.88" of rain on the 14th.

November 13, 1904: This hurricane moved north to near Cape Hatteras. As the system became nontropical, cold air on the west side of the circulation set up an early snowstorm across North Carolina. A twenty-four hour rainfall record was set for November at Farmville (3.17"). The schooner *Robert J. Poulson* went down one-half mile southwest of Hog Island on the 13th.

September 3, 1913: Danville set a new 24-hour rainfall record for September (3.59").

September 30-October 1, 1920: The schooner *Thomas F. Pollard* foundered off Cape Henry.

August 26, 1924: This hurricane passed just east of Cape Hatteras. Maximum sustained winds reached 72 mph at Cape Henry.

September 29-30, 1924: Norfolk saw winds reach 76 mph sustained from a cyclone that became nontropical over the Southeast U.S.. In Fauquier county, four inches of rain fell at Leads Manor on the 29th. In Richmond county, 4.6" of rain fell at Warsaw on the 30th. Leeds Manor (4.00"), Stuart (4.20"), Urbanna (3.80"), and Winchester (2.05") all set 24-hour rainfall records for September during this tempest. The moderate flood along the C & O canal created by the cyclone led to an end of boating operations (High).

December 2, 1925: A rare hurricane formed in the Caribbean Sea and moved north northeast across South Florida and moved into the East coast between Wilmington and Cape Hatteras at 6 p.m.. The storm center passed out to sea near Cape Henry. Langley Field reported 3.36" of rain on the 2nd. Other 24-hour rainfall records for December were set during this storm at Callville (2.24"), Onley (2.30"), Runnymede (2.51"), and Warsaw (3.10").

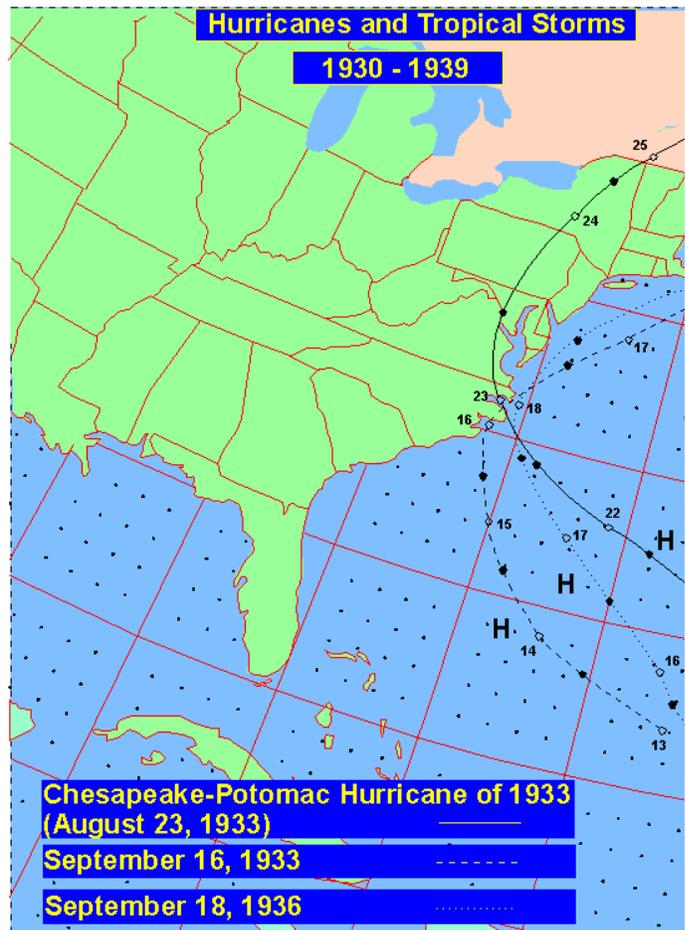
August 11-12, 1928: A category two hurricane moved northwest across Florida on the 7th and 8th, weakening as it wandered northwest into Georgia. The decaying system dumped more than six inches of rain across the Carolinas and Virginia as it moved northeast, sending river levels well beyond flood stage (Barnes II). Norfolk recorded 39 mph sustained winds on the 12th. Heavy rains fell at the Sewer Department in Washington, D.C. when 7.31" deluged the area. The brig *Walton* foundered off Sandy Point, Maryland during the storm.

September 19, 1928 (San Felipe/Lake Okeechobee Hurricane): This tropical cyclone was experienced by the *S.S. Commack* near 17N 48W, and send a radio report about their weather conditions. This was the most easterly radio report concerning a tropical storm in the Atlantic at the time (Barnes II).

Epic destruction and loss of life from this vicious storm spread across Puerto Rico and Florida before it tracked into North Carolina. This storm caused tremendous flooding in North Carolina. Maximum sustained winds were 72 mph at Cape Henry. Tides peaked at 7.2 feet above mean lower low water at Norfolk. Heavy rains were seen at Langley Field on the 18th (3.88") and Onley on the 19th (5.22").

August 21-24, 1933 (Chesapeake-Potomac Hurricane): On the 17th, a tropical storm was discovered about 100 miles east of Puerto Rico. This system quickly strengthened into a hurricane by the 18th, as it tracked northwest (track to the right). As the cyclone neared Bermuda, a blocking high pressure ridge over New England changed the storm's course to more westerly. The British colony of Bermuda was lashed by 80 mph winds as the center passed 100 miles to the southwest of the island.

Rough surf conditions developed near Hampton Roads during the afternoon of the 22nd. The system made landfall near Nags Head around 3 a.m. on the 23rd. By 9 am, the center passed over Norfolk, where the pressure fell to 28.68". Some of the lowest pressures ever measured in Virginia occurred with this hurricane. The lowest pressure of 28.68" occurred at 9:20 a.m.. This was the first time an eye of a hurricane had passed over Norfolk since the great hurricane of September 3, 1821. Sustained gales extended well inland over northern sections of Virginia. Maximum winds were 58 mph at Washington D.C., 70 mph at Norfolk, 82 mph at Cape Henry, and 88 mph at Norfolk Naval Air Station. Areas near the Chesapeake saw over 10 inches of rain (rainfall map below). Some areas measured eight inches of rain in one day. Washington D.C. experienced a 6.39" deluge.



This storm produced a record tide of 9.8 feet above mean lower low water at Sewells Point. Norfolk saw a tide of 9 feet above mean lower low water. Five feet of water flooded the city, damaging area crops.

A six to nine foot storm surge passed up the Chesapeake Bay. A combination of the storm's surge and back water flooding along the Potomac caused crests as high as 12 feet above mean lower low water on the river. Colonial Beach stood by helpless as four feet of water flooded the town and swept the town's amusement park away. Water also flowed into some hotels bordering the Potomac River.

Severe flooding occurred at Alexandria and Washington D.C.. In Washington, D.C., numerous trees were uprooted and many houses unroofed. The Potomac at Alexandria reached its highest stage since the Johnstown Flood of 1889. In Alexandria, high winds played havoc with phone and power lines. High water in Four Mile Run cut off Alexandria from the Federal City. Two men were nearly doomed when the Cameron Run bridge on Telegraph Road was washed out. Farms in Fairfax county suffered heavy damage; fields were flooded, ruining crops. All aviation activities out of Quantico were suspended. High winds and rains flattened corn crops and damaged peach orchards in Loudon county. St. Mary's county saw damage to corn and tobacco. In the Richmond area, damage was confined mainly to broken windows and downed tree limbs. In Anne Arundel county, 44 mph winds took a heavy toll on crops, leading to \$250,000 in damages alone.

Some high water marks in Alexandria included 2 feet at the Ford Motor Company Plant and 5 feet at the Old Dominion Boat Club. Flood waters completely inundated the lower end of King Street in the Old Town section of Alexandria. The Washington-Richmond highway (U.S. Route 1) was inundated to a depth of 8 feet in a few sections below Alexandria at the height of the storm. Mount Vernon Boulevard was under 5 feet of water. Flooding in the Anacostia river rose over the seawall.

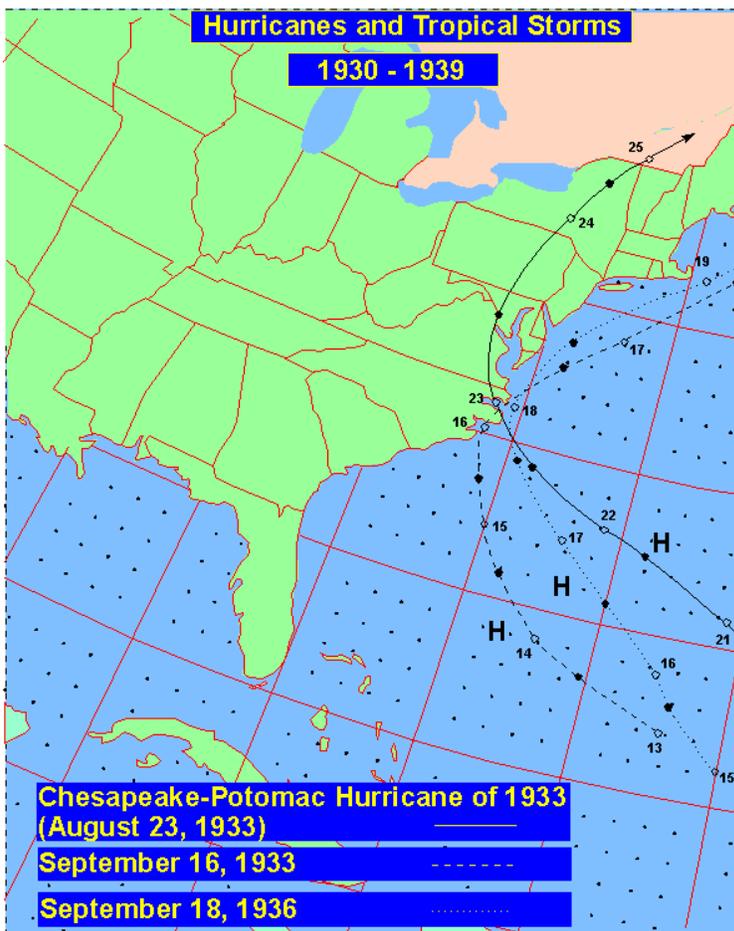
The Washington Hoover airport was inundated to a depth of three feet at the height of the storm. The Benning Bridge was under two and a half feet of water blocking vehicular traffic. Of considerable note was the landing of a pilot named J.B. Duckworth at Washington, D.C., then an Eastern Air Transport night mail flyer who flew by instruments a large way from New York, just before the storm closed down the airport. He would later become the first pilot to intentionally fly into a hurricane off the Texas coast in 1943.

Tidal flooding from the hurricane extended up the tributaries draining into the Chesapeake Bay as well. The James River at Surry, some 40 miles from Hampton Roads reached the highest level in recorded history at 10 a.m. on the morning of August 23, 1933 as the tidal surge swept away the Surry Pier serving the Surry-Jamestown Ferry. The tidal surge moved further up the James River flooding Hopewell and portions of the city of Richmond. River levels were generally three to five feet above normal from Hopewell westward into Richmond.

On the other side of the James River, waters were estimated to be five to eight feet higher than any previous high water mark in the city of Newport News. The York river also went on a rampage and surged into Gloucester Point at the extreme southern end of Gloucester County . The town Post Office and Drug Store were completely demolished. Four feet of water stood in the lobby of the Robbins Hotel.

Wave action from the hurricane turned the Assateague peninsula into an island. Ocean City inlet was carved out by this cyclone. Most of what was left of the tourist industry on the Virginia barrier islands disappeared. The hotel on Cedar Island was destroyed. The clubhouses on Wallop's, Parramore, Revel's, Hog, Cobb's, Mockhorn, Skidmore, and Smith's Islands were badly damaged....and they never recovered. An inlet was formed at Ocean City that remains to this day (Assateague Naturalist). At least ten vessels met their fate in the hurricane.

The fifty-foot schooner yacht *Bluejacket* put out to sea from Sandy Hook, NJ on the 20th. As the boat sailed offshore, high northeast gales developed, and the ship headed for Atlantic City. At daybreak on the 21st, while just off Chincoteague, gales increased just before a lull...the hurricane's eye. Sixty to seventy foot waves knocked the *Bluejacket* around as the winds reached "terrific force" from the southwest... estimated at 100 mph. Pyramidal seas knocked down the masts and the rudder was carried away. Eventually, conditions improved and by the 24th, the S.S. *M&J Tracy* rescued the aimlessly drifting vessel, and the crew arrived at Newport News that night. Fewer than 18 perished in Virginia. Tens of millions of dollars of damage was incurred by the hurricane.



September 16, 1933: On the 8th, a tropical storm was sighted 180 miles east of the Leeward Islands. It moved north, then northwest, as the Bermuda-Azores High re-established itself across the western Atlantic. Following a parabolic course, the hurricane made landfall near Cape Lookout on the morning on the 16th as a formidable category three hurricane on the Saffir-Simpson scale. The hurricane quickly recurved northeast, passing 80 miles east of Norfolk around noon (track to the left).

Heavy damage was seen with this storm in Virginia. Winds rose to 75 mph at Hampton Roads, 87 mph at Cape Henry, and 88 mph at Norfolk Naval Air Station. Tides reached 8.3 feet

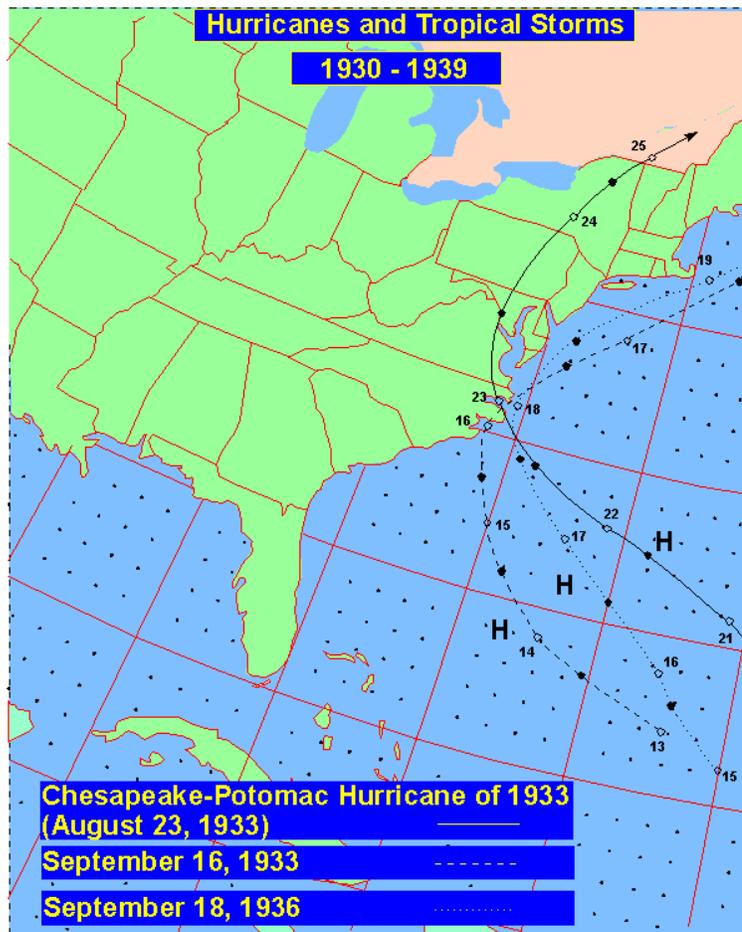
above mean lower low water at Sewells Point. This hurricane reshaped the peninsula where New Point Comfort lighthouse stood into an island.

September 4-6, 1935 (Labor Day Hurricane): The most powerful hurricane ever known to strike the United States, this storm of small diameter moved across the Florida Keys, killing 400 people on its way into the Gulf of Mexico. Its pressure of 26.35", as it passed over the north end of Long Key, became a record low for a land based station in the Western Hemisphere. The system recurved into Tampa Bay and crossed through Georgia and the Carolinas before emerging back into the Atlantic near the North Carolina/Virginia border.

Southeast Virginia saw winds gusting between 40 and 50 mph. Several tornadoes touched down in eastern sections of the state. The most significant tornado tore its way from Portsmouth across Craney Island, western sections of Norfolk, and Willoughby Spit. The oil screw vessel *Co* burned off Chesterton, Maryland. The steamship *Fannie Mae* foundered in the storm one mile east of Windmill Point lighthouse. Three died due to the storm. One million in damages was exacted from Virginia.

September 18, 1936: A tropical storm formed deep within the tropical central Atlantic. It moved west northwest, becoming a hurricane by the 11th. Storm motion slowed, as a nontropical low passed well to the north, causing the system to turn more towards the north. By late on the 12th, high pressure re-established itself to the northeast, and the hurricane resumed its northwest track. Recurving as it made landfall in the Outer Banks of North Carolina, the system accelerated northeast, passing just offshore Norfolk, Cape Cod, and Nova Scotia (track to the right).

This storm was one of the most severe in the history of Cape Hatteras. Norfolk experienced severe flooding. The highway from Currituck to Norfolk was washed out by heavy rains. Buena Vista along the James River set a record crest (22 feet), as did Westham (23.4 feet). Maximum sustained winds reached 68 mph at Hampton Roads and 84 mph at Cape Henry, before the anemometer failed. Tides rose to 9.3 feet above mean lower low water at Sewells Point. The schooner *Clemmie Tavers* was left stranded at Norfolk. Only one person lost their life to the storm.

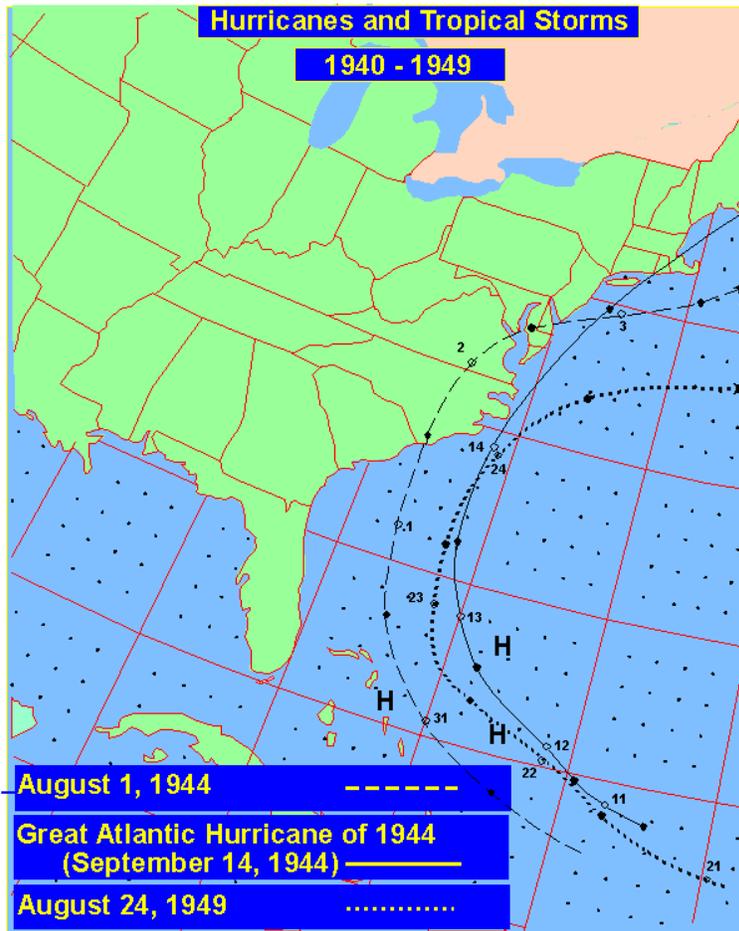


September 17-21, 1938 (Long Island Express): One of the fastest hurricanes ever known to move across the western Atlantic (Emily in 1987 the most recent tropical cyclone to challenge its title), this major hurricane went on to devastate New England. As the low began to take on some nontropical characteristics, its wind field expanded as it passed about 175 miles off the Virginia coast. Gusty winds of 50 to 60 mph blew by the Virginia Capes, even though the state was on the weak west side of the hurricane. Roanoke's pressure fell to 28.62". Cape Henry was lashed by sustained winds of 57 mph.

A stationary front was located along the East Coast prior to the storm's arrival. When the hurricane approached, rain fell in torrents from Virginia northward. Some areas along the Eastern Shore recorded over eight inches of rain with the passage of this great hurricane. Losses were minor compared to the catastrophic losses incurred in New England.

August 13-18, 1940: First observed between St. Martin and St. Thomas on the 5th, this tropical storm began to curve northwest, to the northeast of the Bahamas. Winds reached hurricane force at that time. A high pressure system built in to the north of the cyclone, forcing it on a more westward course to the near the Georgia/South Carolina border. The system meandered across the Southeast U.S. for four days, before becoming diffuse on the 15th.

Rains began in Virginia on the 13th, as the dying storm entered the state from the west. Deluges flooded locations statewide. Hampton Roads measured 4.76 inches. Emporia, on the Meherrin river, reached a flood of record on the 17th, when the stage crested at 31.50 feet, which was 8 ½ feet above flood stage. Mountain rivers and streams went on the rampage, washing out bridges and causing landslides which blocked roads. Several principal highways between Norfolk and southwest Virginia and Asheville were closed. A collision on the 13th involving the Oil Screw *F.B. Scarbrough* five miles above Coles Point may have been caused by this system. Sixteen died in the mountains of Virginia, Tennessee, and North Carolina due to the storm.



September 14-15, 1944: A storm which moved northward along the eastern seaboard from North Carolina up to Newfoundland caused widespread damage (track to the left). Hampton Roads saw winds of 72 mph gusting to 90 mph. Winds of 134 mph sustained with gusts to 150 mph lashed Cape Henry...a wind record which remains standing today for the state. Virginia Beach saw the pressure fall to 28.80". The gas screw *May Dee* foundered off Ocean View. See the table below for other pressures reported across the region.

Rainfall from the storm caused a flood of record at State Farm on the James river (26.4 feet). Damage totaled \$2.5 million. Forty-six perished. Also of note, this system was the first time that air force reconnaissance air craft were used to monitor a storm threatening the East Coast.

August 28, 1949 (Delray Beach Hurricane): After devastating Florida with winds gusting to 160 mph, this cyclone tracked through Georgia and the Carolinas, where heavy rain caused river flooding (track of this storm above). One tornado touched down in the Tidewater. Heavy rains spread northeast through New England, ending a long drought (Barnes II).