State Climate Extremes Committee Memorandum

National Centers for Environmental Information (NCEI)
Asheville, NC
March 2026

State Climate Extremes Committee Memorandum

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DATE: 31 March 2026

SUBJECT: State Climate Extremes Committee Decision Regarding 24-Hour State Snowfall Record for Rhode Island

***Cover Image*:** Significant snow blankets a street in East Greenwich, Rhode Island following a powerful storm system that impacted all of Rhode Island from 22-23 February 2026. Photo Credit: Joe Poccia, Rhode Island State Climate Office.

Table of Contents

Summary

On 17 March 2026, a State Climate Extremes Committee was held virtually to discuss a potential new 24-hour snowfall record for the State of Rhode Island. Exceptional, and in many cases unprecedented, snow fell over Rhode Island from 22-23 February 2026. A powerful low pressure system moving northeast offshore over the Atlantic Ocean combined with sufficiently cold air and abundant moisture generated significant snowfall from the Mid-Atlantic coast northeast towards the coast of Southern New England. Intense snowbands developed over a swath of Rhode Island producing snowfall rates in some cases reaching at least 4 inches per hour. Blizzard conditions occurred in many areas given winds of 35 mph or greater and visibilities at or below one-quarter of a mile were experienced for at least three hours. Although large snowstorms are not unknown in Southern New England, the historical nature of the Blizzard of 2026, certainly achieved a pinnacle ranking in the memories of those who experienced it and climatologically in the historical rankings of snowstorms.

By the afternoon of 23 February 2026 real-time snowfall observations from Rhode Island along with nearby areas in Southeast Massachusetts had shown many totals in excess of 30 inches had occurred. As these reports came in and persistent banding sat over an area of the two states, it became apparent that a historic blizzard and snowfall was taking place. The Rhode Island T.F. Green International Airport located in Warwick serves as the primary real-time observation site and climatological station in the State of Rhode Island as the "Providence" site and is staffed with a Federal Aviation Administration (FAA) airport weather observer and also equipped with an Automated Surface Observing System or ASOS that the observer can augment for elements as deemed needed. Since ASOS cannot directly measure snowfall or snow depth, the observer on site collects snowfall measurements as part of their duties and provides this information with hourly surface weather observations and to the National Weather Service's office located in Norton, Massachusetts. At 1:05 PM Local Standard Time (LST) on 23 February 2026, the National Weather Service's Boston/Norton, Massachusetts office which serves all of Rhode Island, transmitted a Record Event Report statement that a record snowstorm was experienced at Providence, RI. The total snowfall for the storm from when it started on 22 February 2026 through 1:00 PM LST on 23 February 2026 was 32.8 inches. This broke the long standing snowstorm record for the Providence area set during the Blizzard of '78 from 6-7 February 1978 of 28.6 inches. This also pushed the total above the 24-hour Rhode Island State Snowfall Record of 30.0 inches at Woonsocket also set during the Blizzard of '78. By the time the snow had stopped on the evening of 23 February 2026, a total of 37.9 inches of snow was reported at Rhode Island T.F. Green International Airport.

The Blizzard of '78 was a generational storm still remembered by many across Southern New England and for many years was 'The' benchmark blizzard to judge all other snowstorms by. The book *Snowstorms Along the Northeastern Coast of the United States 1955*

to 1985 written by Paul Kocin and Louis Uccellini and published in 1990 and widely regarded as the original go-to-book documenting coastal Northeast snowstorms used a picture from the Blizzard of '78 on the cover of stranded vehicles on a highway due to the volume of snow that fell during this storm. Those images remain etched in the minds of many in Rhode Island as well as Massachusetts, Connecticut, and even in portions of New York and New Jersey that were hard hit by this storm as its power. Thus the event that unfolded in Rhode Island in February 2026 was going to have to go against what is clearly to many the 'gold standard' of blizzards to be judged its place in the history books.

As a result of the values reported and the immense interest of where the February 2026 values would fall in the record books a State Climate Extremes Committee was convened virtually on 17 March 2026 following a visit by staff from the National Weather Service's Boston/Norton, MA office to the weather office at the Rhode Island T.F. Green International Airport on 11 March 2026. Their findings and the analysis of them and this storm are covered in this report. Additionally the SCEC reviewed the prior record for the state for a 24-hour period to ensure accuracy of it. Following a review of the evidence, which found the observer took extra efforts to ensure an accurate reading, and reviewing nearby reports and meteorological evidence. A 24-hour record consists of any consecutive four six-hour snow measurements or a measurement capturing the last 24 hours from the observation time. As airports measure snow every six hours, this allowed for the maximum four six-hour periods to be considered versus a traditional Midnight-Midnight observation.

The following observation was examined by the SCEC to determine its validity and potential status as the greatest 24-hour snowfall total measured in Rhode Island and is considered to be the true and valid record:

- **Location:** Rhode Island T.F. Green International Airport
- **Site Type:** Federal Aviation Administration
- **WBAN Station ID:** 14765
- **COOP Station ID:** 37-6698
- **FAA Station ID:** PVD
- **24-Hour Snowfall Value:** 37.9 inches
- **Date:** 22-23 February 2026

About the State Climate Extremes Committee (SCEC)

This State Climate Extremes Committee (SCEC) was composed of members representing the National Weather Service (NWS) Forecast Office located in Norton, Massachusetts, the NWS's Eastern Region Headquarters System Operations Division (SOD) in Bohemia, New York, the Northeast Regional Climate Center in Ithaca, New York, the Rhode Island State Climate Office located in the Rhode Island Department of Environmental Management, and the National Centers for Environmental Information in Asheville, North Carolina. The voting

rights by a local NWS Office were given to the office that has responsibility for that area being voted on, which in this case falls to the Boston/Norton, Massachusetts office. The SCEC is convened to adjudicate potential records for validity. If validated, the observation is considered the state record for that record type. More details about the SCEC are available online at:
https://www.ncei.noaa.gov/access/monitoring/scec/details.

Note: At the time the SCEC was convened the National Weather Service had yet to undergo a reorganization and this report reflects the structure of the National Weather Service as it was in March 2026.

About the 24-Hour Snowfall Observation and Station

The U.S. Weather Bureau commenced a record of weather observations in the City of Providence on 22 October 1904 at University Hall on the campus of Brown University where it operated until 1 January 1909. The “downtown” Providence office moved an additional three times with the last location being at the Post Office Annex Building on Exchange Terrace operating from 10 June 1940 through 20 May 1953.

A Civil Aviation Administration Airways Station opened at the Administration Building of what is now Rhode Island T.F. Green International Airport on 16 June 1932 in Warwick, about 6.75 miles south-southwest of Downtown Providence (Figures 1 and 2). This lasted through 27 September 1937 when the station became a first-order station operated by the U.S. Weather Bureau. On 12 November 1939 the station moved to Hangar Building #1 which was 660 feet west of the original location. Another move took place on 20 May 1953 when the airport office moved into what was then called the Old Administration Building 660 feet east and operations were combined with the former downtown office. On 1 September 1995 an Automated Surface Observing System or ASOS was commissioned at the airport and became the primary means of collecting surface observation data. The U.S. Weather Bureau which was now the National Weather Service saw the office close here in November 1995 and responsibility transferred to the National Weather Service Office in Taunton, Massachusetts which as of April 2018 moved to nearby Norton. Around this time, the Federal Aviation Administration assigned a Contract Weather Office (CWO) to the airport to take elements of surface observations ASOS could not altogether, such as snowfall and snow depth, along with augmenting other elements as needed.

The current CWO office location is at the PVD Control Tower, on the east side of the airport. Normal hours of operation are from 5:30 A.M. until 12:30 A.M. daily. Due to the expectation of difficult travel conditions during the storm, the observer scheduled for duty on the morning of 23 February reported to the office Sunday night and worked the duration of the storm. This observer has decades of experience in taking observations, formerly with the NWS in Alaska, and at Rhode Island T.F. Green International Airport since 2004.

Figure 1. Landsat Satellite Mosaic map of Rhode Island. Map Credit: U.S. Geological Survey.

Figure 2. Close-up Landsat Satellite Mosaic map of Rhode Island. Note the airport runways northwest of Warwick. Near the center of this image. Map Credit: U.S. Geological Survey.

The snow board and 8” weighing rain gauge are located in an open, grassy area adjacent to the parking lot (Figure 3). There are two snow stakes to help mark the location of the snow board. Note there is also a small hill to the north. This was determined to be the most suitable location based upon a NWS site visit which was done in October, 2025 prior to the winter season.

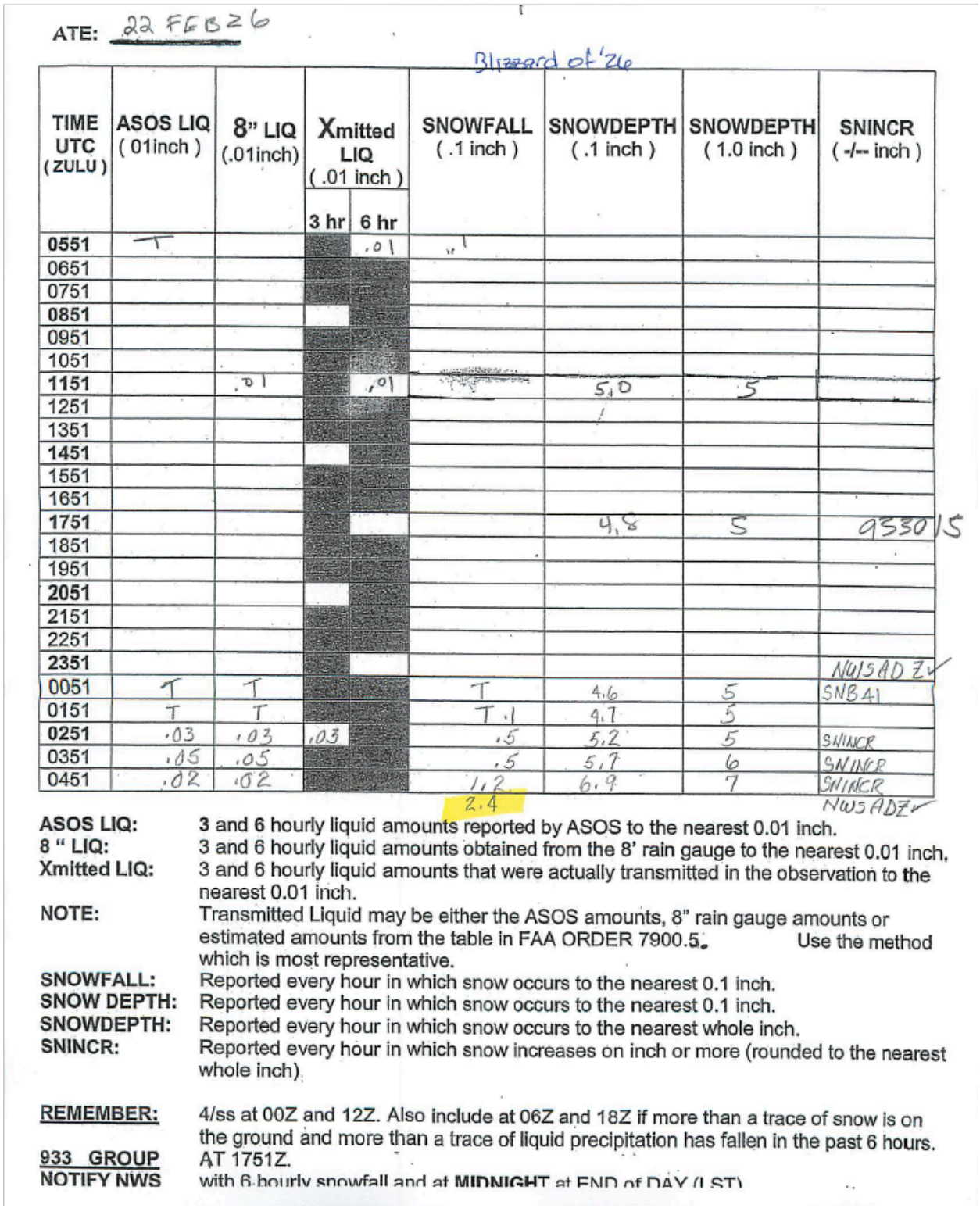
Figure 3. View from the CWO office of the 8 inch rain gauge and snow board location.

During the height of the storm Monday, it became difficult to obtain accurate measurements at the snowboard location due to considerable blowing and drifting snow. The 8” gauge was topped with snow Monday morning, rendering it unusable. As a backup, the observer took several measurements in this area, but also utilized a second snowboard in an alternate location, in a small open field behind the Control Tower (Figure 4).

This location was unobstructed by trees and was deemed to be far enough away from the Control Tower so as not to interfere with snowfall amounts. A recommendation is to use this location for snow measurements going forward.

Figure 4. View of the small open field behind the KPVD Control Tower.

The observer verified that he measured at both locations to come up with snowfall measurements, ensured the snowboard was placed on top of the snow, and cleared the snowboard no more than once every six hours. The FAA requires the CWO to measure snowfall hourly but did not add up the hourly totals to report six-hour totals to WFO Boston (those were jotted down elsewhere since it is not a requirement). Copies of the CWO Snowfall Worksheets that follow FAA requirements follow as well as the Snowfall Log from WFO Boston (Figures 5 through 7).



ATE: 22 FEB 26

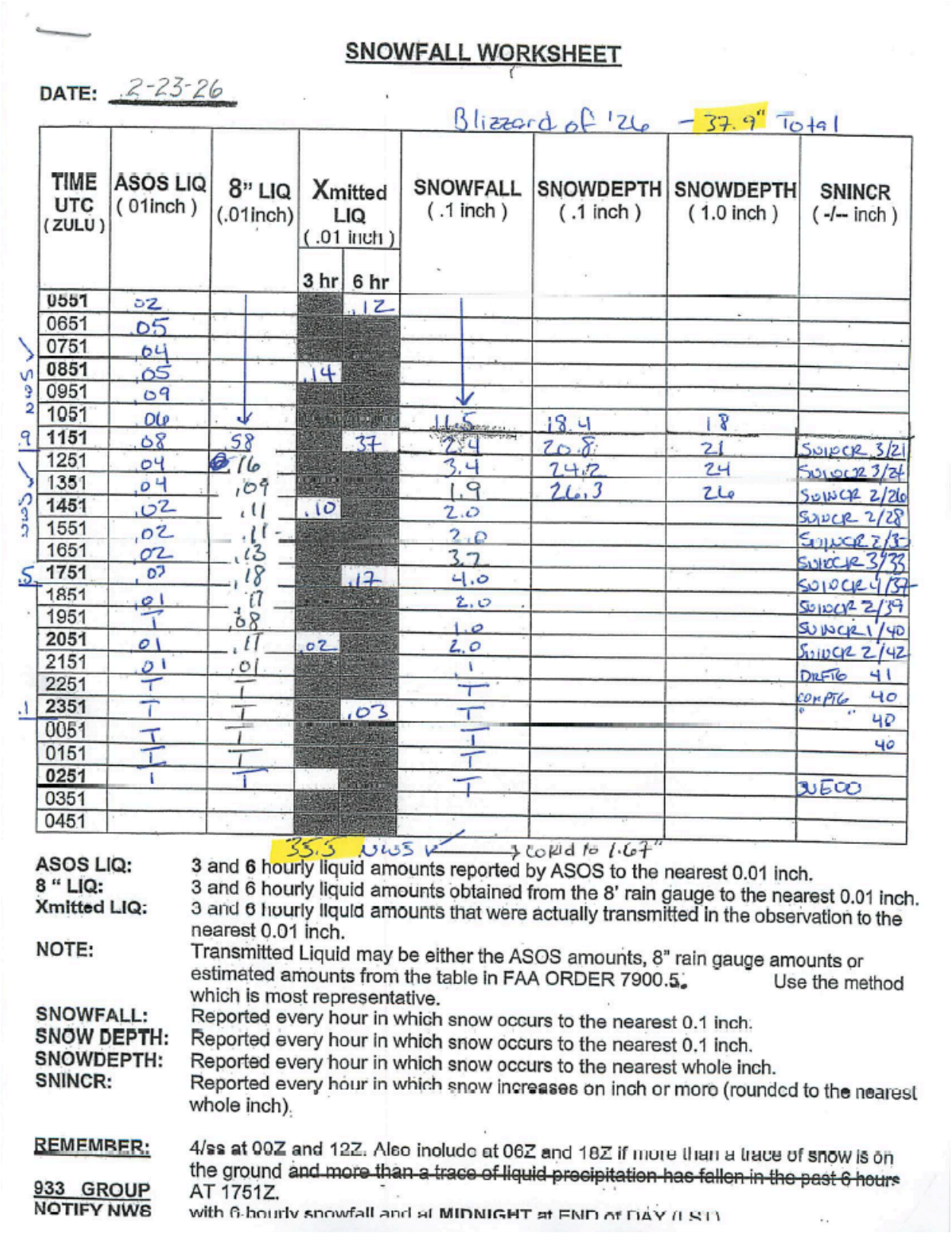
Blizzard of '26

TIME UTC (ZULU)	ASOS LIQ (01inch)	8" LIQ (.01inch)	Xmitted LIQ (.01 inch) 3 hr	Xmitted LIQ (.01 inch) 6 hr	SNOWFALL (.1 inch)	SNOWDEPTH (.1 inch)	SNOWDEPTH (1.0 inch)	SNINCR (-/-- inch)
0551	T			.01	T			
0651								
0751								
0851								
0951								
1051								
1151		.01		.01		5.0	5	
1251								
1351								
1451								
1551								
1651								
1751						4.8	5	933015
1851								
1951								
2051								
2151								
2251								
2351								NWSADZ
0051	T	T			T	4.6	5	SNB41
0151	T	T			T.1	4.7	5	
0251	.03	.03	.03		.5	5.2	5	SNINCR
0351	.05	.05			.5	5.7	6	SNINCR
0451	.02	.02			1.2 2.4	6.9	7	SNINCR NWSADZ

ASOS LIQ: 3 and 6 hourly liquid amounts reported by ASOS to the nearest 0.01 inch.
8 " LIQ: 3 and 6 hourly liquid amounts obtained from the 8' rain gauge to the nearest 0.01 inch.
Xmitted LIQ: 3 and 6 hourly liquid amounts that were actually transmitted in the observation to the nearest 0.01 inch.
NOTE: Transmitted Liquid may be either the ASOS amounts, 8" rain gauge amounts or estimated amounts from the table in FAA ORDER 7900.5. Use the method which is most representative.
SNOWFALL: Reported every hour in which snow occurs to the nearest 0.1 inch.
SNOW DEPTH: Reported every hour in which snow occurs to the nearest 0.1 inch.
SNOWDEPTH: Reported every hour in which snow occurs to the nearest whole inch.
SNINCR: Reported every hour in which snow increases on inch or more (rounded to the nearest whole inch).

REMEMBER: 4/ss at 00Z and 12Z. Also include at 06Z and 18Z if more than a trace of snow is on the ground and more than a trace of liquid precipitation has fallen in the past 6 hours.
933 GROUP AT 1751Z.
NOTIFY NWS with 6 hourly snowfall and at **MIDNIGHT** at END of DAY (LST)

Figure 5. CWO Snowfall Worksheet for KPVD, 22 February 2026.



SNOWFALL WORKSHEET

DATE: 2-23-26

Blizzard of '26 – 37.9" Total

TIME UTC (ZULU)	ASOS LIQ (01inch)	8" LIQ (.01inch)	Xmitted LIQ (.01 inch) 3 hr	Xmitted LIQ (.01 inch) 6 hr	SNOWFALL (.1 inch)	SNOWDEPTH (.1 inch)	SNOWDEPTH (1.0 inch)	SNINCR (-/-- inch)
0551	.02			.12				
0651	.05							
0751	.04							
0851	.05		.14					
0951	.09							
1051	.06				11.5	18.4	18	
1151	.08	.58		.37	2.4	20.8	21	SNINCR 3/21
1251	.04	.16			3.4	24.2	24	SNINCR 3/24
1351	.04	.09			1.9	26.3	26	SNINCR 2/26
1451	.02	.11	.10		2.0			SNINCR 2/28
1551	.02	.11			2.0			SNINCR 3/3
1651	.02	.13			3.7			SNINCR 3/33
1751	.07	.18		.17	4.0			SNINCR 4/37
1851	.01	.17			2.0			SNINCR 2/39
1951	T	.08			1.0			SNINCR 1/40
2051	.01	.11	.02		2.0			SNINCR 2/42
2151	.01	.01			.1			DRIFTG 41
2251	T	T			T			COMPTG 40
2351	T	T		.03	T			" 40
0051	T	T			T			40
0151	T	T			T			
0251	T	T			T			SNINCR
0351								
0451								

35.5 NWS ← cold to 1.67"

ASOS LIQ: 3 and 6 hourly liquid amounts reported by ASOS to the nearest 0.01 inch.
8 " LIQ: 3 and 6 hourly liquid amounts obtained from the 8' rain gauge to the nearest 0.01 inch.
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SNINCR: Reported every hour in which snow increases on inch or more (rounded to the nearest whole inch).

REMEMBER: 4/ss at 00Z and 12Z. Also include at 06Z and 18Z if more than a trace of snow is on the ground ~~and more than a trace of liquid precipitation has fallen in the past 6 hours~~

933 GROUP AT 1751Z.
NOTIFY NWS with 6-hourly snowfall and at MIDNIGHT at END of DAY (LST)

Figure 6. CWO Snowfall Worksheet for KPVD, 23 February 23 2026.

Sun	February 22, 2026				
Time	Station ID				
	BDL	BOS	ORH	PVD	WFO BOX
12Z	T			0.1	
18Z	T				
00Z					
Midnight	2.8	T	2.3	2.4	0.8
Daily Total	2.8	T	2.3	2.5	0.8
Remarks					

Mon	February 23, 2026				
Time	Station ID				
	BDL	BOS	ORH	PVD	WFO BOX
12Z	5.9	5.2	11.0	13.9	9.5
18Z	2.9	9.2	2.7	16.5	16.0
00Z	0.2	2.5	0.2	5.1	5.5
Midnight		0.2	T	0.0	0.1
Daily Total	9.0	17.1	13.9	35.5	31.1
Remarks	ORH 12z ob was reported as of 14:30z.				
	ORH 18z ob was reported as of 20:47z.				
	BOS called at 2230z and said it was pretty much over w/ an extra 0.2". Put it in for the midnight ob.				

Figure 7. WFO BOX Snowfall Log showing 6-Hour and Daily Snowfall Totals for their climate sites.

These findings confirm that proper measuring techniques were followed by the observer on duty.

Meteorological Plausibility of the 24-Hour Snowfall Observation

A surface area of low pressure organized near the Outer Banks of North Carolina during the morning hours of 22 February 2026 and began to move north-northeast during the afternoon and evening hours passing east of the Delmarva Peninsula and Jersey Shore during the early to mid-morning hours of 23 February and rapidly intensified as noted on satellite imagery (Figure 8). It then passed to the southeast of Cape Cod, Massachusetts during the evening hours of 23 February and then northeast away from the Gulf of Maine by the late evening hours of 23 February.

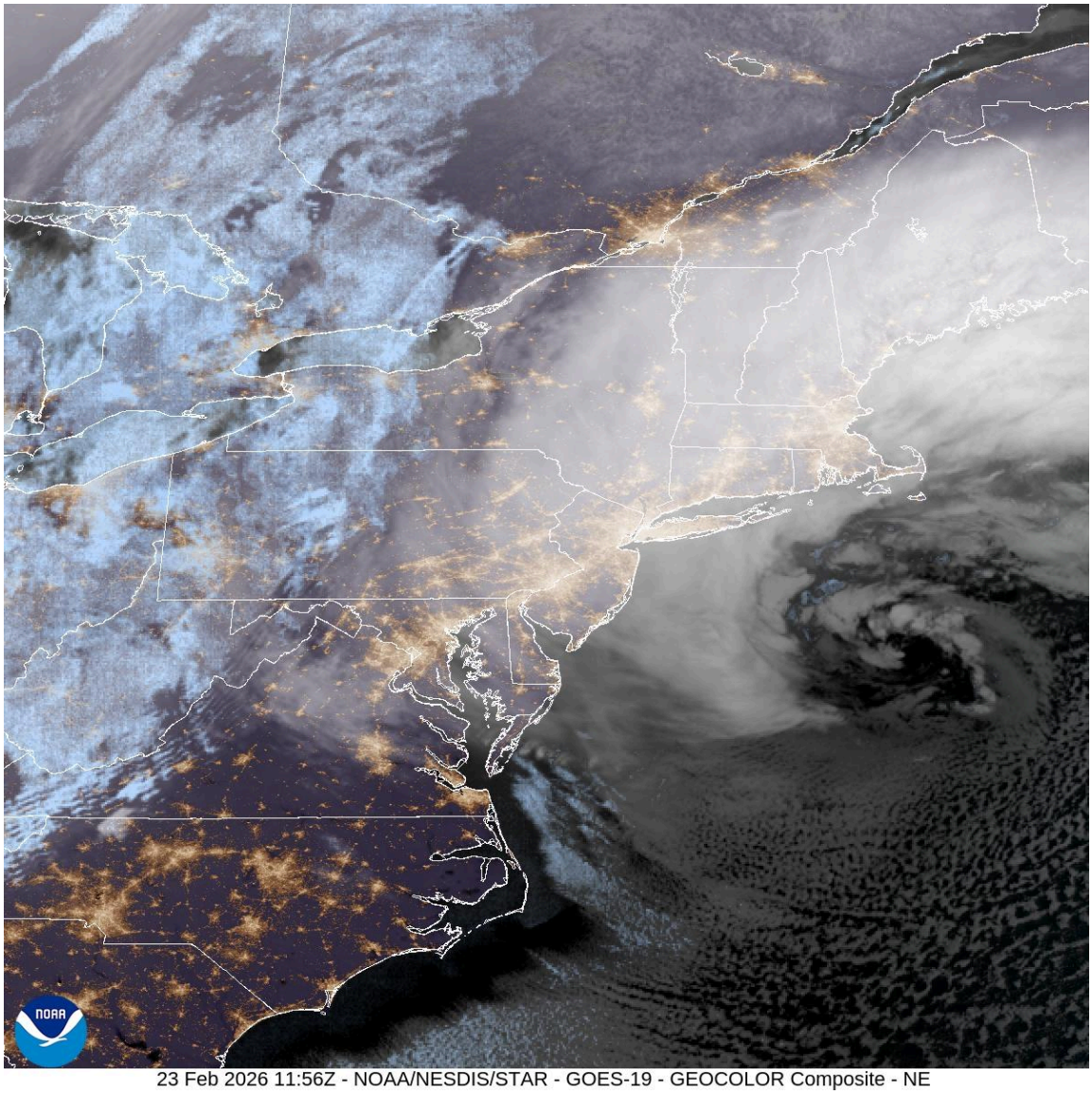


Figure 8. GOES-19 multispectral infrared satellite image showing an area of low pressure south-southeast of Rhode Island at 1156 UTC (6:56 A.M. LST) on 23 February 2026.

The coastal storm responsible for producing blizzard conditions in Rhode Island followed a favorable track for heavy snowfall in southern New England, passing just southeast of the 40 N/70 W “benchmark” over the Atlantic Ocean (Figure 9). Such a track favors much of Rhode Island for the heaviest snowfall, especially with a rapidly deepening low pressure system. The pressure of the storm dropped from 1004 millibars (mb) (29.65 inches) at 7 A.M. LST on Sunday, 22 February to 968 mb (28.59”) at 7:00 A.M. LST on Monday, 23 February, a difference of 36 mb in 24 hours which classifies this as a “bomb cyclone” (pressure drop of at least 24 mb in 24 hours).

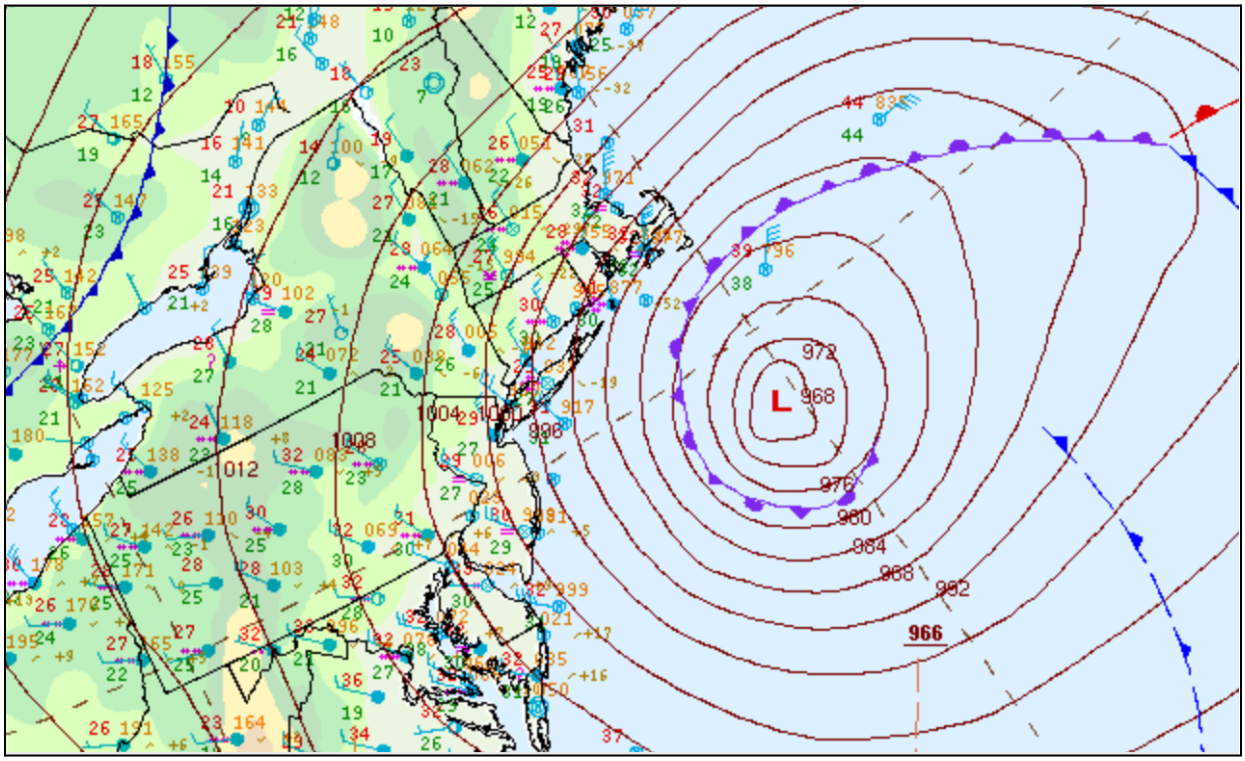


Figure 9. Surface Weather Map for 7:00 A.M. LST, Monday, 23 February 2026.

Radar imagery shows widespread snow began to overspread Rhode Island during the evening hours of 22 February 2026 with snow beginning at Rhode Island T.F. Green International Airport at 0041UTC (7:41 P.M. LST). Observations show heavy snow was reported starting at 0900 UTC (4:00 A.M. LST) on 23 February 2026 and continued through 1850 UTC (1:50 P.M. LST) on 23 February 2026 continuously before becoming lighter in intensity of fall. Radar imagery from the Taunton, MA WSR-88D (KBOX) showed the heaviest snow band pivoted across much of Rhode Island and southeast Massachusetts from Sunday night, 22 February, through Monday morning, 23 February (Figure 10). This band produced snowfall rates of 2 to 4 inches per hour at the Rhode Island T.F. Green International Airport between 1151 Coordinated Universal Time (UTC). and 2051 UTC (6:51 A.M. LST and 3:51 P.M. LST) on 23 February 2023. During this time the depth of snow on the ground rose from 21 to 42 inches. Snowfall finally ended at Rhode Island T.F. Green International Airport at 0200 UTC on 24 February 2026 (9:00 P.M. LST on 23 February 2026).

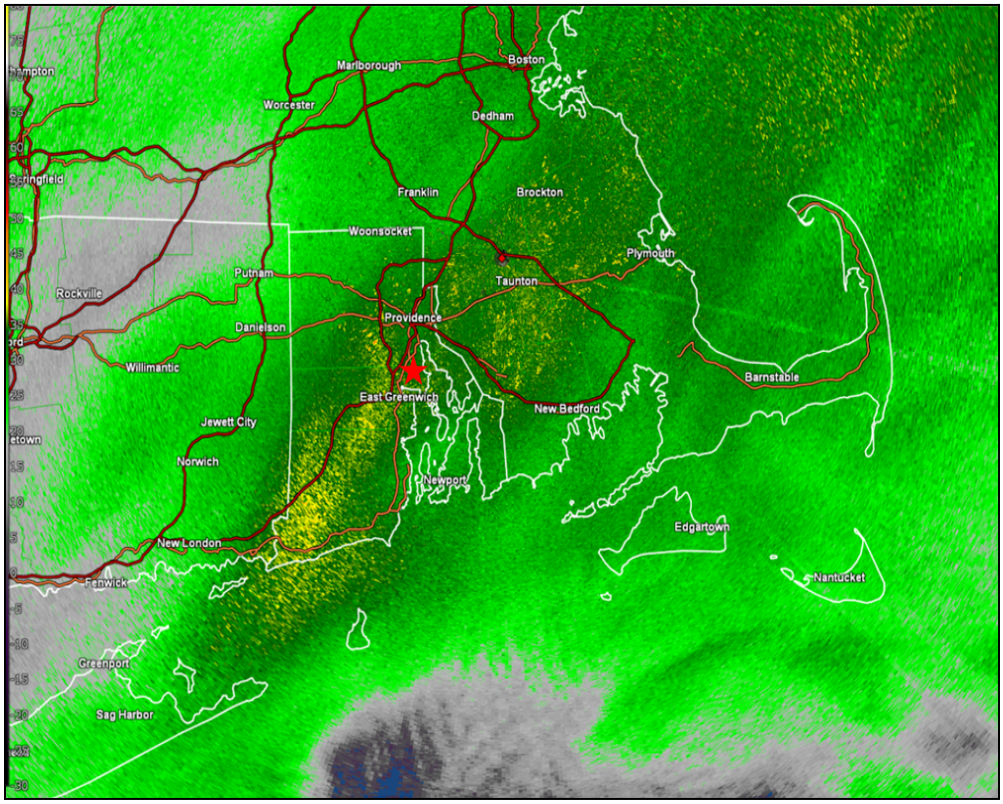


Figure 10. Radar image showing the intense snow band over KPVD on February 23, 2026. Location of KPVD indicated by a red star.

There were numerous reports in Rhode Island that reported in excess of 30 inches of snow from this event as well as across adjacent areas of Massachusetts that were also impacted by the same intense snowband in Bristol, Norfolk and Plymouth Counties. The highest totals in Rhode Island were received in Kent County where totals reaching or exceeding 3 feet were received from multiple sources as shown in Table 1 and all were at or very close to the Rhode Island T.F. Green International Airport.

The snow was accompanied by a prolonged period of gusty winds from the north-northeast to north which did cause blowing and drifting (Figures 11 and 12). The peak wind gust at Rhode Island T.F. Green International Airport was 68 mph from the North-Northeast at 8:31 A.M. LST on 23 February 2026. The high winds also caused a lengthy period of visibility at or below a quarter of a mile with the visibility reported at 1/8th of a mile on the 1251 UTC (7:51 A.M. LST) 23 February 2026 observation. The National Weather Service in Boston/Norton, MA confirmed the site reached blizzard criteria of ¼ mile or less and wind speeds that were sustained or frequent gusts from 5:25 A.M. LST through 2:00 P.M. LST on 23 February 2026. High winds were reported throughout Rhode Island during this storm with the highest gust anywhere in the state of 74 mph clocked at Quonset State Airport in North Kingstown at 8:20 A.M. LST on 23 February 2026. Other peak gusts included 73 mph on Block Island and 68 mph at Newport State Airport.

Figure 11. Snowfall from the 22-23 February 2026 Blizzard in East Greenwich, RI. Note the blowing and drifting of the fallen snow on the ground. Photo Credit: Joe Poccia, Rhode Island State Climate Office.

Figure 12. Drifted snow in South Kingstown, RI following the 22-23 February 2026 Blizzard. Photo Credit: Darren Austin, Rhode Island State Climate Office.

Selected Snowfall Event Totals in Rhode Island from 22-23 February 2026			
Location	**County**	**Amount**	**Source**
R.I. T.F. Green Int'l AP	Kent	37.9 inches	Airport Observer
Warwick 3.9 NNE	Kent	37.5 inches	CoCoRaHS
Warwick 1 SE	Kent	36.2 inches	Trained Spotter
Pawtucket 2.6 SSE	Providence	34.3 inches	CoCoRaHS
Warwick 3.8 N	Kent	34.0 inches	CoCoRaHS
Coventry 2 SSE	Kent	33.5 inches	Trained Spotter
Bristol 1 E	Bristol	32.0 inches	Trained Spotter
Woonsocket	Providence	32.0 inches	Cooperative Observer
Charlestown 3.0 WSW	Washington	31.5 inches	CoCoRaHS
Coventry 1.2 SW	Kent	31.0 inches	CoCoRaHS
Barrington 1.3 WNW	Bristol	30.5 inches	CoCoRaHS
Narragansett 2.9 N	Washington	30.0 inches	CoCoRaHS
Providence 2.1 NE	Providence	29.4 inches	CoCoRaHS
Coventry 2.5 NW	Kent	29.0 inches	CoCoRaHS
North Kingston 0.4 W	Washington	29.0 inches	CoCoRaHS
Saunderstown 1.4 SW	Washington	29.0 inches	CoCoRaHS
Greenville 2.6 WSW	Providence	28.3 inches	CoCoRaHS
Portsmouth	Newport	28.2 inches	Trained Spotter
Block Island	Washington	28.0 inches	Cooperative Observer
Little Compton	Newport	28.0 inches	Trained Spotter
North Smithfield 0.6 S	Providence	28.0 inches	CoCoRaHS
Portsmouth 2 SSW	Newport	27.8 inches	Trained Spotter

Wakefield-Peacedale 1.1 SW	Washington	28.0 inches	CoCoRaHS
Jamestown 0.3 SSE	Newport	27.2 inches	CoCoRaHS
Coventry 1.9 NE	Kent	26.5 inches	CoCoRaHS
Foster 4.0 SSE	Providence	26.0 inches	CoCoRaHS
North Smithfield 0.7 SE	Providence	26.0 inches	CoCoRaHS
Warwick 3.2 NNE	Kent	26.0 inches	CoCoRaHS
Kingston	Washington	25.3 inches	Cooperative Observer
East Greenwich 2.8 NE	Kent	24.3 inches	CoCoRaHS
Valley Falls 1.1 W	Providence	24.0 inches	CoCoRaHS
Greenville 0.7 NNW	Providence	23.0 inches	CoCoRaHS
Greenville 6.7 WSW	Providence	22.0 inches	CoCoRaHS
Greene 1.4 E	Kent	21.1 inches	CoCoRaHS
Richmond 4.6 NNE	Washington	20.5 inches	CoCoRaHS
Pascoag 0.5 SSW	Providence	18.0 inches	CoCoRaHS

Table 1. Selected snowfall event totals from Rhode Island.

Previous 24-Hour Snowfall Total Record for Rhode Island

The previously accepted 24-hour snowfall record for the State of Rhode Island was 30.0 inches measured in Woonsocket on 7 February 1978 from the “Blizzard of ’78”. Woonsocket is located right along the northern border of Rhode Island and Massachusetts towards the northeast portion. Woonsocket sits along the Blackstone River and is hilly with some level areas and contains a mixture of development and a few light wooded parcels (Figure 13).

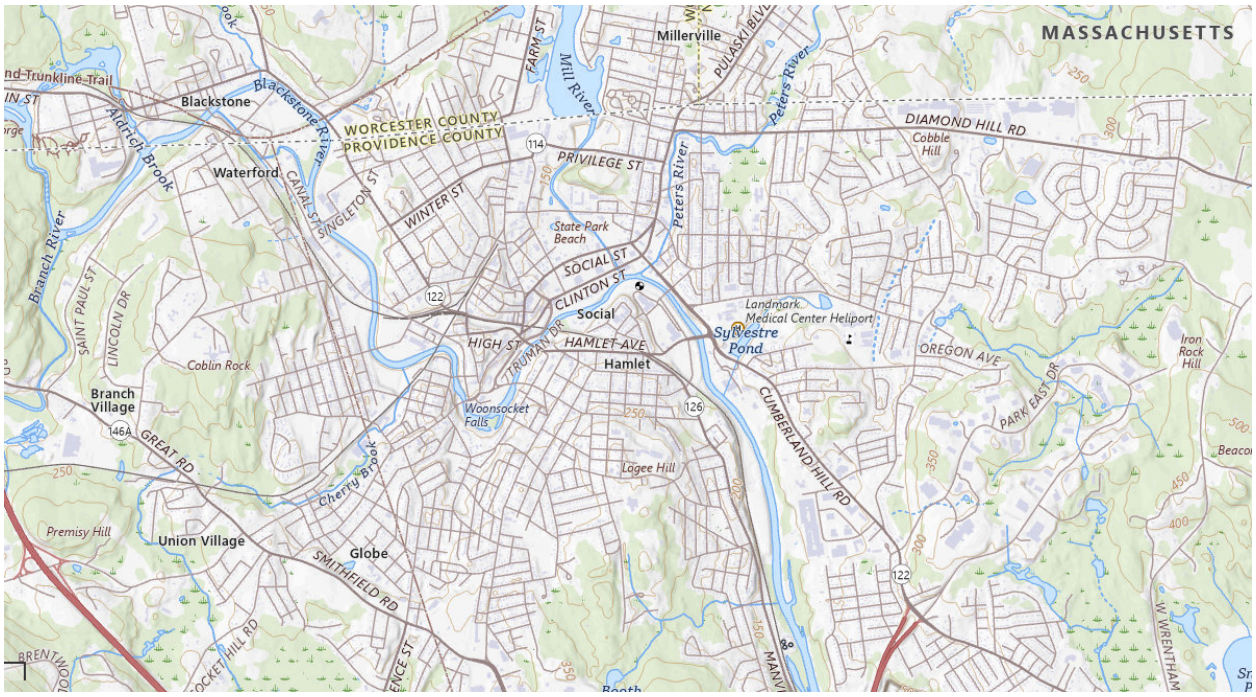


Figure 13. U.S.G.S. topographic map of Woonsocket, RI.

The observation for Woonsocket came from a National Weather Service Cooperative Observer located at the Wastewater Treatment Plant which was located on the south side of Woonsocket just west of the Blackstone River (Figures 14 and 15) in a narrow river valley between hills to the east and west. This is about 1.7 miles southeast of downtown Woonsocket in an area that is a mix of industrialized property and wooded parcels with residential homes to the west and northwest. This station was equipped with an eight inch standard rain gauge along with equipment to monitor the river level. Observations were taken daily at 8:00 A.M. LST. The station was originally opened on 1 March 1885 and was re-located to this location on 20 November 1967 and remained here until 9 July 2019 until it moved to the present location located 3,797 feet west.

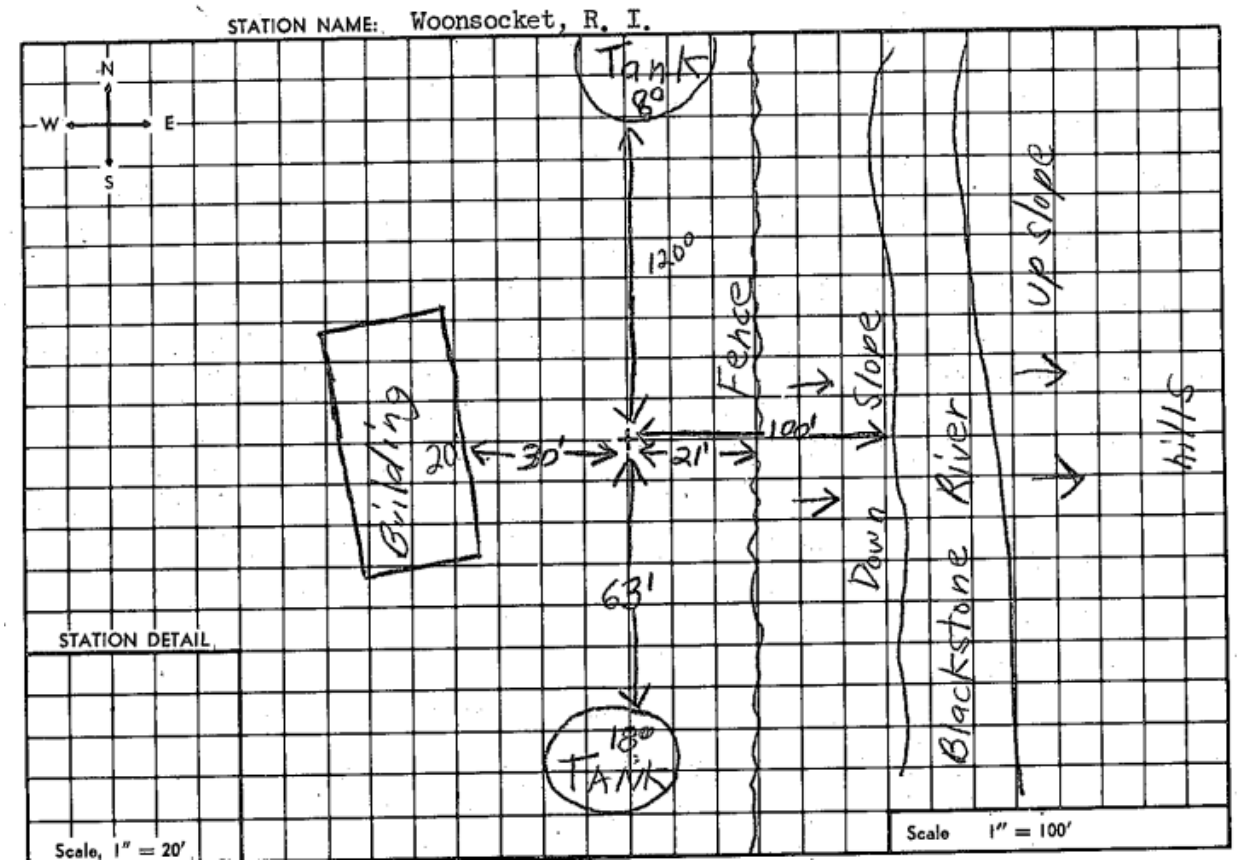


Figure 14. Sketch of Woonsocket, RI Cooperative Observer station from a 22 November 1967 report.

Figure 15. Woonsocket Cooperative Observer location in July 2012 that was the location in February 1978. Image Credit: Google.

The Blizzard of ‘78 was a classic coastal low pressure system (Figure 16) that formed east of the Outer Banks of North Carolina on the evening of 5 February 1978 and then moved northeast off the Mid-Atlantic and southern New England Coasts and intensified on 6 February before departing out into the Atlantic on 7 February. The combination of the intense coastal low, that eventually saw the pressure drop to 984 millibars while east of the

Jersey Shore on the evening of 6 February and a surface area of high pressure to the north created a tight pressure gradient that resulted in strong winds accompanying the storm.

Observations at T.F. Green Airport shows the light snow started at 10:10 AM LST on 6 February 1978. By 2:11 PM LST, snow became heavy and visibility decreased to 1/16th of a mile which resulted in blowing snow accompanied by wind gusts well over 35 mph. Snow fell at the rate of 2 to 3 inches per hour from 5:58 PM to 9:58 PM on 6 February 1978 at the airport. A peak wind gust of 58 mph from the northeast was recorded at 7:17 PM LST that day. Snow finally ended on 7 February 1978 at 10:44 PM LST and by the time all was said and done 27 inches of snow was on the ground at T.F. Green Airport with the snowfall measuring 28.6 inches over two days with 27.6 inches falling in a 24-hour period.

At Woonsocket, the Blizzard of ’78 produced 38.0 inches of snow for the event with 30.0 inches falling in the 24-hour period ending at 8:00 A.M. on 7 February. The depth the next day peaked at 36 inches of snow on the ground (Figure 17). It is worth noting the form shows 4 inches of snow was on the ground prior to this storm. The depths do show as corrected on the original scan of the form, however, the new fall of 30.0 inches is clear along with an annotation on it. Other totals in Rhode Island from this storm included 36.0 inches at North Foster, 33.0 inches at Burrville, 28.0 inches at Newport Rose and 24.6 inches at Kingston. Block Island measured only 10.5 inches at the State Airport there. The snow depth reached 42 inches at North Foster at 11 P.M. on 7 February. While unofficial reports of 54 inches of snowfall were reported to the National Weather Service in Providence during this event, these were believed to be too high and likely contained old snow on the ground or impacted by blowing and drifting snow and were discounted in a National Weather Service Service Assessment on the Blizzard of ‘78 published in September of that year. The team even then was concerned about accurate snow measurements from the storm given the blowing and drifting that took place. This storm was rated a Category 3 on the Northeast Snowfall Impact Scale (NESIS) developed in 2004 (“Regional Snowfall Index (RSI) | National Centers for Environmental Information (NCEI)”) as shown in Figure 18.

Overall the Blizzard of ‘78 dropped two to three feet of snow across Rhode Island with the exception of Block Island in a 30 hour or less period. Movement was immobilized by the Blizzard due to the volume of snow and severe drifting and hundreds of vehicles were abandoned on Interstate 95 (Figure 19). As a result a driving ban was in effect for several days and the National Guard and Army had to be flown in to help. Several roofs collapsed across the state including a factory and club in Woonsocket. There were 26 deaths in Rhode Island along with significant beach erosion and pier damage from the battering surf.

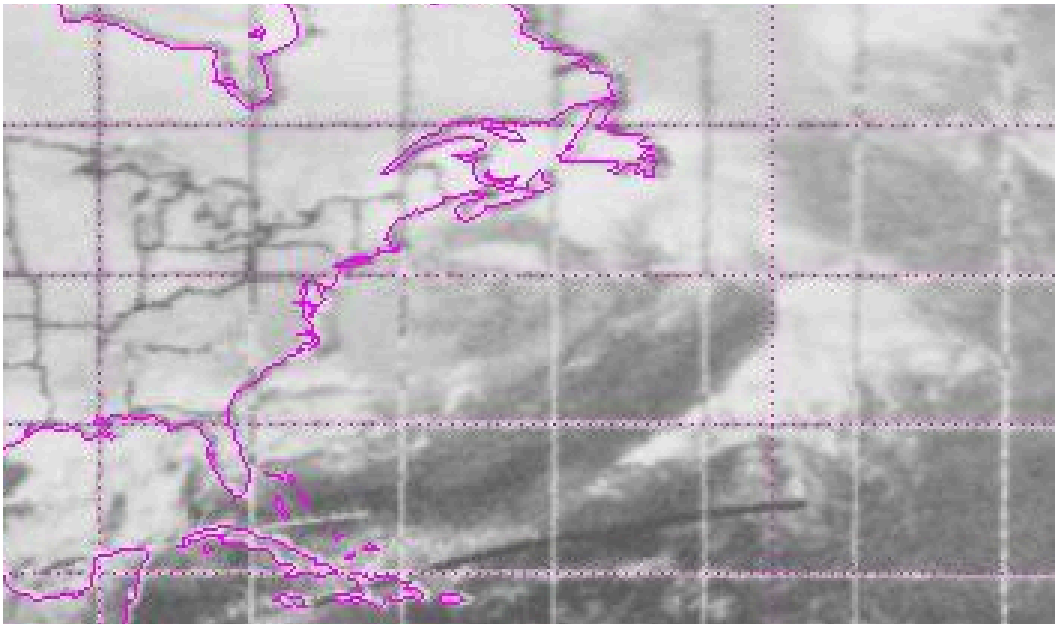
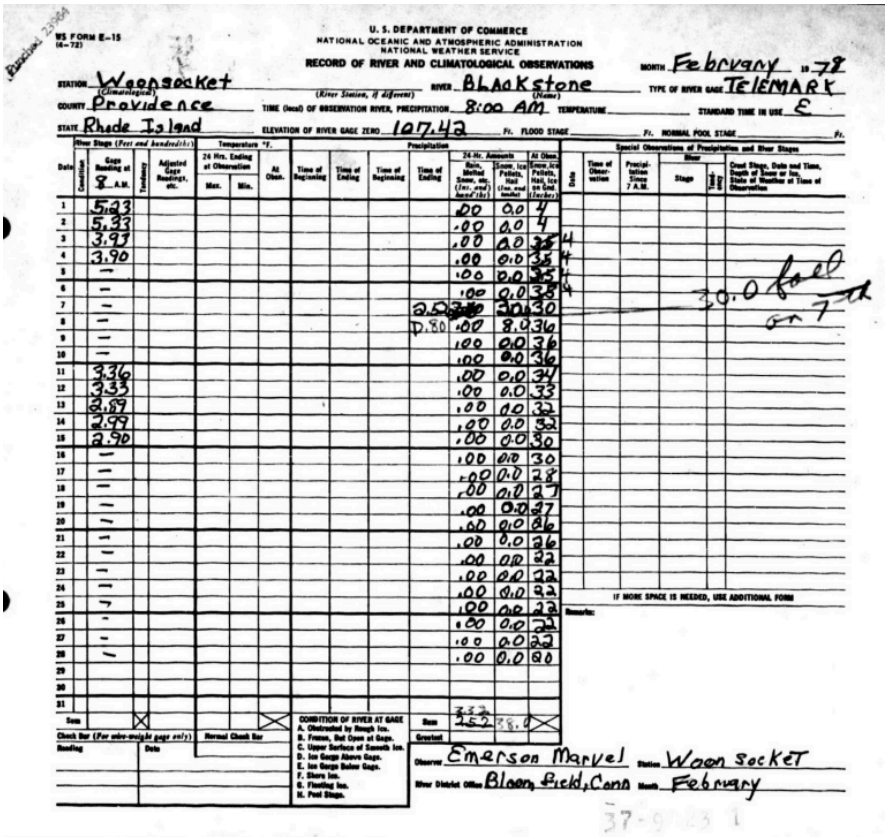


Figure 16. 00Z 7 February 1978 Infrared satellite image of the Blizzard of '78 near peak intensity off the coast of southern New England. Image Credit: GIBBS/NCEI.



WS FORM E-15 (6-72)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

RECORD OF RIVER AND CLIMATOLOGICAL OBSERVATIONS

STATION Woonsocket (Climatological) — RIVER BLACKSTONE (Name) — MONTH February 19 78
COUNTY Providence (River Station, if different) — TYPE OF RIVER GAGE TELEMARK
STATE Rhode Island — TIME (local) OF OBSERVATION RIVER, PRECIPITATION 8:00 AM — TEMPERATURE — STANDARD TIME IN USE E
ELEVATION OF RIVER GAGE ZERO 107.42 Ft. — FLOOD STAGE — Ft. — NORMAL POOL STAGE — Ft.

Date	River Stage (Feet and hundredths): Condition	Gage Reading at 8 A.M.	Tendency	Adjusted Gage Readings, etc.	Temperature °F. 24 Hrs. Ending at Observation: Max.	Min.	At Obsn.	Precipitation: Time of Beginning	Time of Ending	Time of Beginning	Time of Ending	24-Hr. Amounts: Rain, Melted Snow, etc. (Inc. and/or hundredths)	Snow, Ice Pellets, Hail (Inc. and/or tenths)	At Obsn. Snow, Ice Pellets, Hail, Ice on Gage (Inches)
1		5.23										.00	0.0	4
2		5.33										.00	0.0	4
3		3.97										.00	0.0	35
4		3.90										.00	0.0	35
5		—										.00	0.0	35
6		—										.00	0.0	38
7		—										2.5[illegible]	[illegible]	30
8		—										P.80 .00	8.0	36
9		—										.00	0.0	36
10		—										.00	0.0	36
11		3.36										.00	0.0	34
12		3.33										.00	0.0	33
13		3.89										.00	0.0	32
14		2.99										.00	0.0	32
15		2.90										.00	0.0	30
16		—										.00	0.0	30
17		—										.00	0.0	28
18		—										.00	0.0	27
19		—										.00	0.0	27
20		—										.00	0.0	26
21		—										.00	0.0	26
22		—										.00	0.0	22
23		—										.00	0.0	22
24		—										.00	0.0	22
25		—										.00	0.0	22
26		—										.00	0.0	22
27		—										.00	0.0	22
28		—										.00	0.0	22
29		—										.00	0.0	22
30		—										.00	0.0	22
31		—										.00	0.0	22
Sum												2.52	8.0	
Greatest														

Special Observations of Precipitation and River Stages

Date	Time of Observation	Precipitation Since 7 A.M.	River: Stage	River: Tend.	Cond. Stage, Date and Time, Length of Time or Ice, State of Weather at Time of Observation
					30.0 foot on 7th

IF MORE SPACE IS NEEDED, USE ADDITIONAL FORM

Remarks:

Check Bar (For wire-weight gage only) Reading — Date — Normal Check Bar

CONDITION OF RIVER AT GAGE
A. Obstructed by Rough Ice.
B. Frozen, But Open at Gage.
C. Upper Surface of Smooth Ice.
D. Ice Gauge Above Gage.
E. Ice Gauge Below Gage.
F. Shore Ice.
G. Floating Ice.
H. Pool Stage.

Observer Emerson Marvel — Station Woonsocket
River District Office Bloomfield, Conn — Month February

37-9[illegible]

Figure 17. Woonsocket, RI monthly observation form from February 1978 from National Weather Service Cooperative Observer.

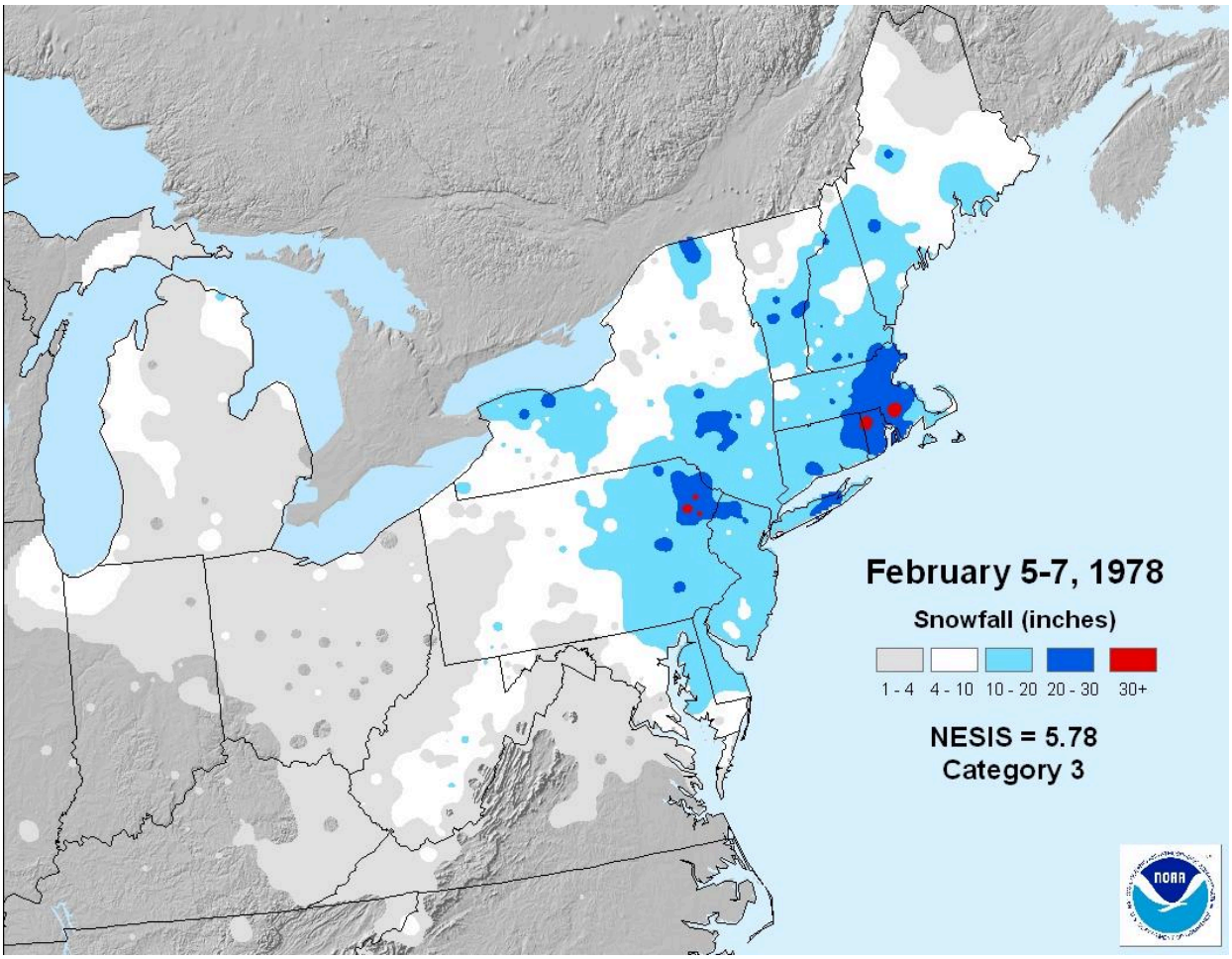


Figure 18. Map showing the general areas of accumulating snowfall of the Blizzard of '78. Note the axis of heaviest snowfall in Southeast New England.

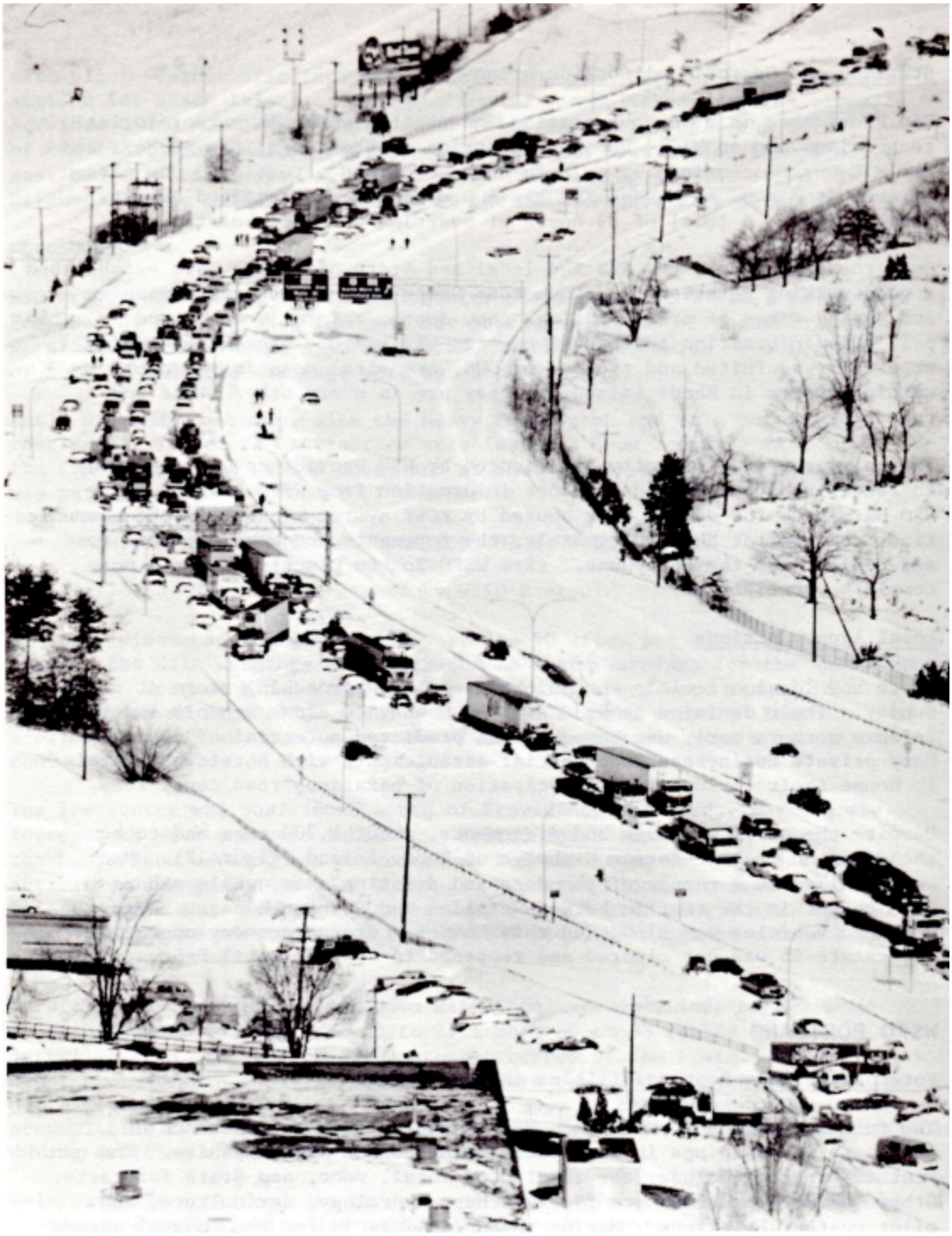


Figure 19. Interstate 95 in Rhode Island on 7 February 1978. Photograph Credit: Providence Journal Bulletin, published in original 1978 National Weather Service Service Assessment on Page 30.

Finding of Committee on 24-Hour Snowfall Record

The committee concluded the evidence presented from the site visit conducted on 11 March 2026 showed the observer not only followed procedures for taking snowfall measurements, but also ensured the area used to collect readings would result in a quality reading. The committee had little doubt about the meteorological plausibility of the event given the documentation of it in real-time and the radar images showing the intense snowbands that impacted the area of Rhode Island where the station was located. Furthermore, the observer was highly experienced, with a long history of accurate snowfall measurements. As was noted by a member of the SCEC, the storm impacted the perfect spot in the state where we have one of our best observation sites. Additionally several of this SCEC's members have served on other state snowfall extremes over the years and have reviewed and voted on many values and settings over the years for taking snowfall and snow depth readings.

The following observation was examined by the SCEC to determine its validity and potential status as the greatest 24-hour snowfall total measured in Rhode Island and is considered to be the true and valid record:

- **Location:** Rhode Island T.F. Green International Airport
- **Site Type:** Federal Aviation Administration
- **WBAN Station ID:** 14765
- **COOP Station ID:** 37-6698
- **FAA Station ID:** PVD
- **24-Hour Snowfall Value:** 37.9 inches
- **Date:** 22-23 February 2026

The unanimous agreement of the SCEC, based on evidence as stated above, has determined that the 37.9 inches measured at Rhode Island T.F. Green International Airport from 22-23 February 2026 set the new state record for 24-hour snowfall for the State of Rhode Island. The SCEC made their determination on the call held on 17 March 2026.

NCEI Climate Monitoring Chief Decision:

Approved as recommended in boldface above:	Not approved returned to SCEC with no action taken:

GLEASON.KARIN.LYNN.1365855877 Digitally signed by GLEASON.KARIN.LYNN.1365855877 Date: 2026.03.30 08:13:43 -04'00'

Committee Members (Voting):

- Joe Dellicarpini, Science and Operations Officer, NWS Boston/Norton, MA
- Chris Stachelski, Observing and Climate Program Leader, NWS Eastern Region
- Keith Eggleston, Regional Climatologist, Northeast Regional Climate Center
- Joe Poccia, State Climatologist, Rhode Island State Climate Office
- Karin Gleason, National Centers for Environmental Information, Asheville, NC

Additional teleconference participants:

- Frank Nocera, Warning Coordination Meteorologist, NWS Boston/Norton, MA
- Bryant Korzeniewski, National Centers for Environmental Information, Asheville, NC
- Samantha Borisoff, Northeast Regional Climate Center
- Chelsea Priest, Rhode Island State Climate Office
- Tami Houston, National Centers for Environmental Information, Asheville, NC

References

"Regional Snowfall Index (RSI) | National Centers for Environmental Information (NCEI)." National Centers for Environmental Information (NCEI), https://www.ncei.noaa.gov/access/monitoring/rsi/nesis. Accessed 19 Mar. 2026.