

# **CERTIFIED PAST WEATHER REPORT**

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**Prepared For:**  
**John Doe**  
**Law Firm of John Doe**

**Reference:**  
James v ABC Company - SAMPLE  
Greentown, NJ | February 10, 2014

**Submitted on:**  
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## INTRODUCTION

The following report was requested by John Doe from Law Firm of John Doe. At the request of Mr. Ward, I have examined the weather conditions for 1 Main Street in Greentown, NJ and the surrounding environs from February 8 - 10, 2014.

It is my understanding that during the evening of February 10, 2014, Plaintiff James, slipped and fell on black ice on the black top driveway next to the garage of the subject property.

In order to determine the weather conditions for 1 Main Street in Greentown, NJ within a reasonable degree of meteorological and scientific certainty, I analyzed the following: official surface weather observations, records of climatological observations, public information statements, sunrise – sunset times, Doppler RADAR images, and other National Weather Service products. Weather data was accessed from the official online web pages of the National Centers for Environmental Information (NCEI). The NCEI is a consolidation of the National Oceanic and Atmospheric Administration's (NOAA) three existing national data centers: the National Climatic Data Center (NCDC), the National Geophysical Data Center (NGDC), and the National Oceanographic Data Center (NODC). Data was also retrieved from the New Jersey Weather & Climate Network and Weather Underground.

My report of the actual weather conditions as well as expert opinions and appropriate conclusions within a reasonable degree of Meteorological and scientific certainty follows. They are based on the aforementioned weather data, and 18 years of professional experience in forecasting and preparing weather reconstruction reports for law firms and the insurance industry.

## DETAILED WEATHER ANALYSIS

### WEATHER SUMMARY

**February 8, 2014** was mostly cloudy with late day snow. During the pre-dawn hours, the sky became cloudy and the temperature fell from an early high of 28–29 degrees into the mid-20s by sunrise, 7:26 AM. Exposed, undisturbed and untreated ground surfaces were clear of any naturally precipitated snow and/or ice accumulation from all prior storms. During the daylight hours, the weather was cloudy. Snow overspread Greentown, NJ between 4 and 5 PM. Snow continued for the rest of the calendar day as the temperature reached an evening low of 14–15 degrees. The 24-hour snowfall accumulation was approximately 4.0–5.0 inches.

The National Weather Service in Mount Holly, NJ had a Winter Storm Warning in effect from 1 PM through Midnight.

**February 9, 2014** featured pre-dawn light snow, then became mostly sunny. Light snow from the previous day tapered off between 6:30 and 7:30 AM with a temperature that fell from an early pre-dawn high of 16–17 degrees into the low-teens. Since 12 AM, an additional 2.0–2.5 inches of snow had fallen, and this brought the two-day snowfall total to about 6.0–7.5 inches. The ongoing Winter Storm Warning was cancelled at 12:26 PM. For the rest of the daylight hours, the weather became mostly sunny. At night, the weather remained mainly clear as the temperature fell to a low of -2 to -1 degrees toward Midnight.

**February 10, 2014 (Day of Incident)** was mostly sunny. Under a mainly clear pre-dawn sky, the temperature fell to a low of -4 to -3 degrees. At 7 AM, exposed, undisturbed and untreated ground surfaces were covered with approximately 6.0–7.0 inches of naturally precipitated snow and ice from the February 2–3 storm. During the daylight hours, the weather remained mostly sunny as the temperature rose to an afternoon high of 24–25 degrees. After sunset, 4:46 PM, the sky was overall mainly clear as the temperature fell into the mid-to-upper single digits toward Midnight.

## WEATHER TABLES

Table 1 below contains the daily weather conditions for 1 Main Street in Greentown, NJ and the surrounding environs from February 8 - 10, 2014. **Temperatures** are in degrees Fahrenheit. **Weather** is a general description of the predominant weather conditions during the day. **Precipitation (Precip)** is the amount of rain, melted snow, and/or ice that occurred during the day and is reported in inches. A trace of precipitation is an amount less than 0.01 inches. **Snow/Sleet** is the 24-hour snow/sleet accumulation reported in inches. A trace of snow/sleet is less than 0.1 inches. **Ground Conditions** refer to the average amount of snow and/or ice cover, in inches, on exposed, undisturbed, and untreated ground surfaces. The measurement is normally taken at 7 AM, and any amount less than 0.5 inches is considered a Trace.

**Table 1. Daily Weather Table**

Day	Temperature		Weather	Precip	Snow   Sleet	Ground Conditions
	High	Low				
2/8	28-29	14-15	Late day snow	0.40-0.50	4.0-5.0	0.0
2/9	16-17	-2 to -1	Pre-dawn light snow, then mostly sunny	0.15-0.25	2.0-2.5	6.5-7.5
2/10	24-25	-4 to -3	Mostly sunny	0.00	0.0	6.0-7.0

Table 2 below provides an estimate of the hourly weather conditions for 1 Main Street in Greentown, NJ and the surrounding environs on February 10, 2014. **Temperatures (Temp)** are in degrees Fahrenheit. **Weather** is the present weather observed at the time shown, unless otherwise indicated. **Hourly Precip** is the amount of precipitation (rain, melted snow and/or ice), in inches, that fell during the previous hour. **Ground Conditions** refer to the average amount of snow and/or ice cover, in inches, on exposed, undisturbed, and untreated ground surfaces at the time shown.

**Table 2. Hourly Weather Table**

<b>Time</b>	<b>Temp</b>	<b>Weather</b>	<b>Hourly Precip</b>	<b>Ground Conditions</b>
<b>3 PM</b>	24–25	Mostly sunny	0.00	5.5–6.5
<b>4 PM</b>	24–25	Mostly sunny	0.00	5.5–6.5
<b>5 PM</b>	22–23	Mainly clear	0.00	5.5–6.5
<b>6 PM</b>	19–20	Partly cloudy	0.00	5.5–6.5
<b>7 PM</b>	15–16	Partly cloudy	0.00	5.5–6.5
<b>8 PM</b>	12–13	Mainly clear	0.00	5.5–6.5
<b>9 PM</b>	11–12	Mainly clear	0.00	5.5–6.5
<b>10 PM</b>	10–11	Mainly clear	0.00	5.5–6.5
<b>11 PM</b>	8–9	Clear	0.00	5.5–6.5
<b>Midnight</b>	7–8	Mainly clear	0.00	5.5–6.5

## **WEATHER RECORDS**

### **SURFACE WEATHER OBSERVATIONS**

The National Oceanic and Atmospheric Administration (NOAA) Surface Weather Observations are usually taken at airports with a frequency of at least one observation per hour. The principal code used to collect meteorological data by various reporting stations worldwide is known as METAR. The METAR observations generally contain some or all of the following information: present weather, hourly temperature, cloud height and coverage, visibility, air pressure, wind direction and speed, precipitation amounts, and the depth of snow and ice on the ground.

In addition to the NOAA Surface Weather Observations, there is also a network of non-NOAA observations available from both publicly and privately owned instrumentation. While these observations are not controlled by NOAA, they are integrated by NOAA into their Meteorological Assimilation Data Ingest System (MADIS) (<http://madis.noaa.gov/>). These non-NOAA observations can often be utilized as a supplement to the more reliable and comprehensive METAR data to aid in meteorological analysis.

In order to estimate the weather conditions for 1 Main Street in Greentown, NJ and the surrounding environs (elevation approximately 999 feet) from February 8 - 10, 2014, the following stations were examined. The approximate distance from the incident site along with the elevation of each station is provided. See Figure 1 on page 10.

- Somerville Somerset Airport, KSMQ; Somerville, NJ (METAR)  
Elevation 274 feet – located 12.7 miles West-Northwest
- Newark International Airport, KEWR; Newark, NJ (METAR)  
Elevation 7 feet – located 18.7 miles Northeast
- Trenton Mercer County Airport, KTTN; Trenton, NJ (METAR)  
Elevation 190 feet – located 25.9 miles Southwest
- New Brunswick, NJ (NJ Weather & Climate Network)  
Elevation 85 feet – located 4.7 miles southwest

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## RECORDS OF CLIMATOLOGICAL OBSERVATIONS

The NOAA Cooperative Observer Program is a nationwide weather and climate monitoring network consisting of volunteer citizens and institutions observing and reporting weather information on a 24-hour basis. Daily observations include some or all of the following information: maximum and minimum temperature, temperature at observation time, precipitation amounts (rain, melted snow and/or ice), evaporation rates, soil temperature, river stage, snowfall, and snow depth.

In addition to these NOAA climatological observations, there is also a network of non-NOAA daily weather observations available nationwide from COCORAHS.org and other non-NOAA organizations. Most of these observations are also integrated by NOAA into their Meteorological Assimilation Data Ingest System MADIS and can be utilized as a supplement to the more reliable records of climatological observations.

In order to estimate the weather conditions for 1 Main Street in Greentown, NJ and the surrounding environs (elevation approximately 999 feet) from February 8 - 10, 2014, the following stations were examined. The approximate distance from the incident site along with the elevation of each station is provided. See Figure 1 on page 9.

- Bound Brook 2 miles west, NJ  
Elevation 30 feet – located 6.8 miles west West-Northwest
- Plainfield, NJ  
Elevation 90 feet – located 5.4 miles Northeast
- New Brunswick 3 miles Southeast  
Elevation 86 feet – located 4.8 miles South-Southeast
- Franklin Twp 3.8 ENE, NJ, NJ-SM-12 (COCORAHS)  
Elevation 84 feet – located 2.8 miles South-Southwest
- Franklin Twp 2.1 ENE, NJ, NJ-SM-3 (COCORAHS)  
Elevation 105 feet – located 4.2 miles South-Southwest
- Hillsborough Twp 4.7 ESE, NJ, NJ-SM-1 (COCORAHS)  
Elevation 98 feet – located 8.2 miles South-Southwest

## **PUBLIC INFORMATION STATEMENTS**

The National Weather Service Forecast Office in Mount Holly, NJ may issue Public Information Statements during and after a weather event that has been affecting their region. Public information statements come from highway departments, hourly weather observation stations, cooperative observers, law enforcement officials, the general public, skywarn spotters, and the media. Some types of weather phenomenon reported are: snow and ice accumulations, peak wind speeds and rainfall amounts. In addition, each individual forecast office may use Public Information Statements for storm damage surveys, climate records or other miscellaneous weather information.

## **DOPPLER RADAR IMAGES**

Doppler RADAR is used to detect where precipitation (rain, snow, sleet, hail, etc.) is falling in the atmosphere. There are approximately 155 operational Doppler RADAR sites across the United States. Each RADAR site offers numerous products. For this report, I examined Short Range Base Reflectivity images. Base Reflectivity images depict the intensity and location of precipitation from approximately 143 miles outward from the RADAR site. The resolution of Short Range Base Reflectivity images is approximately 0.62 miles by 1 degree azimuth. Depending on the mode of operation used, images are available every 4 to 10 minutes. All images were derived from the RADAR site KDIX, which is located in Fort Dix, NJ and were accessed from the National Centers for Environmental Information (NCEI).

## **NATIONAL WEATHER SERVICE PRODUCTS**

The National Weather Service Forecast Office in Mount Holly, NJ responsible for issuing daily zone forecasts, most watches, warnings, advisories, and special statements for the Greentown, NJ area. Daily zone forecasts are issued several times a day, sometimes more if updates are needed. These forecasts are immediately made available to the Public on the Internet, local radio and/or television stations. The watches, warnings, advisories, and special statements are issued for the Greentown, NJ area when impending weather meets certain criteria set by the National Weather Service.

## STATION MAP



**Figure 1** - A general map of the accident location (red star) and the weather observation stations (in blue, gold, green, orange and pink) used to reconstruct the weather for 1 Main Street in Greentown, NJ (elevation approximately 999 feet) from February 8 - 10, 2014 (Source: Google Earth).

## CERTIFICATION

I certify that the information in this report is true and accurate and that any estimations, interpolations or assumptions that have been made were done so with expert accuracy by a professional meteorologist. Additionally, I reserve the right to amend these conclusions made herein upon further discovery of additional meteorological data.

Matthew Potter  
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