

# FORENSIC WEATHER CONSULTANTS, LLC

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## **FORENSIC WEATHER INVESTIGATION OF THE WEATHER CONDITIONS ON JUNE 14, 2008 IN THE VICINITY OF 1773 ROUTE 22 IN HILLSIDE, NEW JERSEY**

February 13, 2010

**CASE NAME/FILE NUMBER:** “John Smith v. The Spectacular Corporation”  
**DATE AND TIME OF INCIDENT:** June 14, 2008 at 7:28 p.m. EDT  
**PREPARED FOR:** Mr. Joe Attorney, Esquire  
**COMPANY:** Wecan, Suethem & Wynn, LLP

### **ASSIGNMENT:**

This case was assigned to me by Joe Attorney or Wecan, Suethem & Wynn, LLP. I was asked to perform an in-depth weather analysis and forensic weather investigation in the vicinity of Route 22 in Hillside, New Jersey in order to determine what the weather conditions were leading up to and including the time of this incident. According to the accident report and plaintiff’s bill of particulars, the accident occurred at 7:28 p.m. EDT on June 14, 2008.

### **METHODOLOGY:**

Forensic Weather Consultants, LLC uses only the most trusted and reliable sources of weather information that can be certified by the federal government. In order to accurately determine the weather conditions that existed leading up to and including the time of the incident, a detailed search was performed to find the closest, official weather stations to the location of the incident. Using the computer program “Google Earth”, weather station locations provided by the National Climatic Data Center were plotted and are indicated by a yellow pushpin. The location of the incident was plotted by our office and is indicated by a red pushpin. This map will help give you an approximate location of the weather stations we used in this study and their proximity to the location of the incident. A copy of this “Google Earth” map is attached to the end of this report.

In order to perform my analysis of the weather conditions that existed, I obtained and reviewed official copies of the following weather records:

- Hourly surface weather observations / Quality Controlled Local Climatological Data from Newark Liberty International Airport in Newark, New Jersey on June 14, 2008
- Cooperative observer station reports from Cranford, New Jersey; Harrison, New Jersey; and Canoe Brook, New Jersey in June 2008
- The publication “Local Climatological Data” from Newark Liberty International Airport in Newark, New Jersey in June 2008
- Astronomical Data for Hillside, New Jersey on June 14, 2008
- 0.5 degree tilt-Base Reflectivity Doppler Radar images from the Upton, New York radar site zoomed in over the incident location
- Various National Weather Service (N.W.S.) statements, advisories, bulletins and reports issued by the Upton, New York office.

The weather data and Climatological records used for this analysis are the official records that Meteorologists rely upon every day during the normal course of business and are either kept in our office or at the National Climatic Data Center. The findings in this report utilize the weather records that were available at the time of data retrieval for this case. Any additional weather records and data that become available at a later date may be incorporated into this report in the future.

In addition to the weather records and climatological data listed above, I also reviewed the following information that was provided to me:

- Plaintiff’s verified Bill of Particulars
- Depositions of all parties
- Accident Report
- Photographs
- Plaintiff’s discovery responses

Doppler Radar images and several other types of weather records were used in this study. Doppler radar images are useful for locating precipitation. As the radar unit sends a pulse of energy into the atmosphere and if any precipitation is intercepted by the energy, part of the energy is scattered back to the radar. These return signals, called “radar echoes”, are assembled to produce radar images. The location of the colored radar echoes indicates where precipitation is falling and the various colors indicate the intensity of the precipitation through the color code key on the right side of the radar image itself. Doppler radar images are received approximately every 6 minutes and can determine if precipitation was falling at the incident location and if so, when it started and stopped.

It should be noted that the radar image date and time stamps that are given on the Doppler radar images are given in “GMT”, which is Greenwich Mean Time. In order to convert “GMT” to Eastern Daylight Time (EDT), a subtraction of 4 hours is necessary. The correct time adjustments have already been made in this report.

## **ANALYSIS:**

### **JUNE 14, 2008 (DAY OF THE INCIDENT)**

Doppler radar images that were zoomed in over the incident location and nearby surface observations indicated that a strong thunderstorm was in the process of moving across the accident location when this motor vehicle accident occurred. The thunderstorm moved from West to East and began in Hillside, New Jersey at approximately 7:04 p.m.

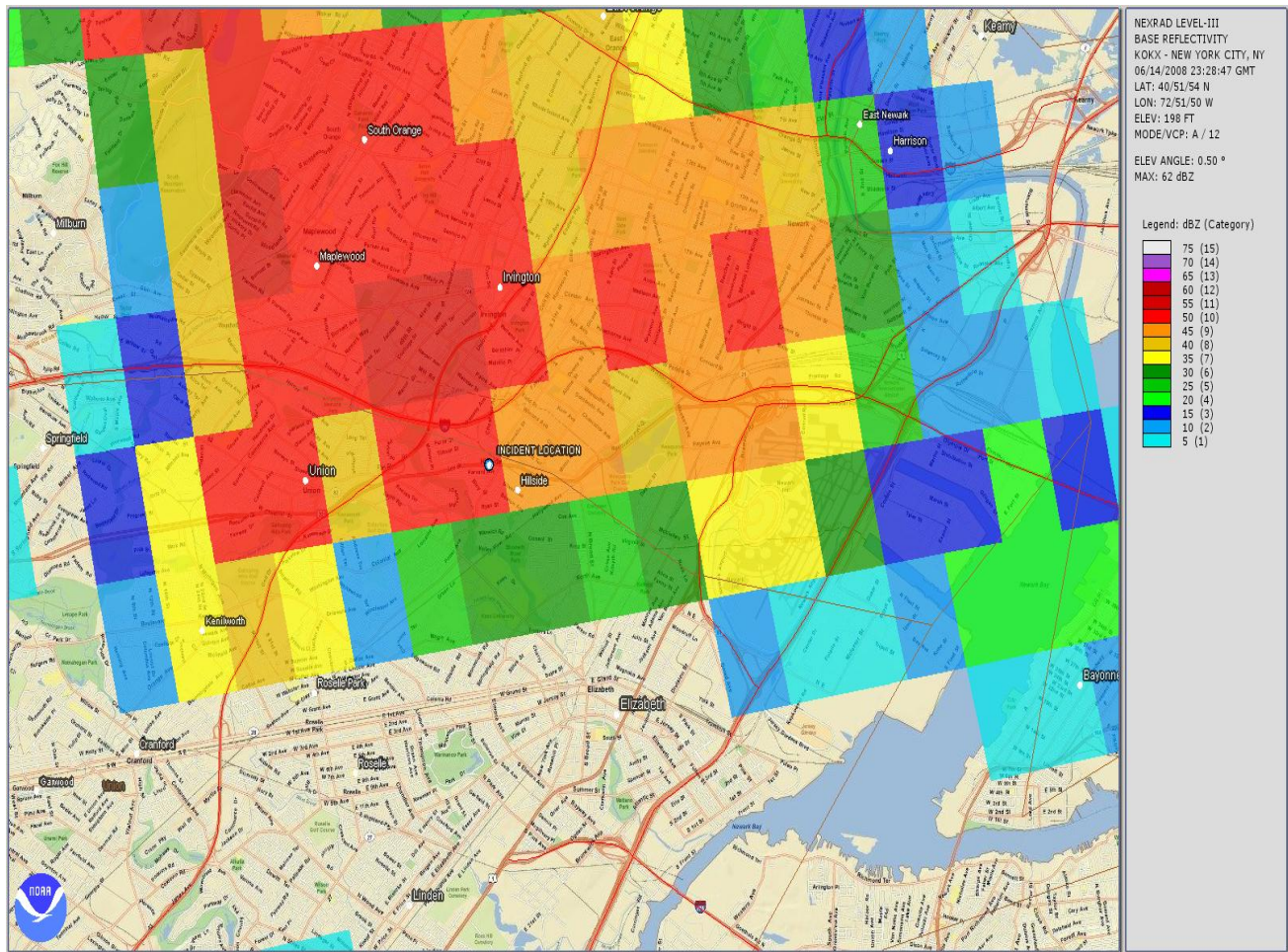
Light, moderate and occasionally heavy rain fell nearly continuously from 7:04 p.m. until approximately 7:42 p.m. on June 14, 2008. Torrential downpours were also occurring. Approximately 0.85” of rain accumulated between 7:04 p.m. and 7:42 p.m. on June 14, 2008 (time and date of the incident). After a short lull in the precipitation, occasional light rain fell again beginning at 9:15 p.m. and this continued through 11:48 p.m. An additional 0.06” of rain fell after the time of the incident.

At 7:28 p.m. EDT on June 14, 2008 (time and date of the incident), heavy rain with torrential downpours was occurring with a strong thunderstorm that was passing over the incident location, the air temperature was 73 degrees Fahrenheit and approximately 0.85” of rain accumulated with the rain storm that was in progress.

### **DOPPLER RADAR IMAGERY ON JUNE 14, 2008**

The Doppler radar image shown below was received at 23:28:47 GMT (7:28 p.m. EDT) on June 14, 2008 (day of the incident). The location of the incident is labeled “Incident Location” and is denoted by a white dot. The color key on the right side of the radar image denotes the intensity of the precipitation. Light blue shaded areas indicate light precipitation and the red, purple and white shaded areas typically denote very intense precipitation or severe weather.

At 7:28 p.m. on June 14, 2008, the Doppler radar image below showed that a very strong thunderstorm was in progress over the incident location. This thunderstorm was causing very heavy rain and torrential downpours to fall. At the time of the motor vehicle accident, the roads were wet, puddles were present and actively forming and areas of localized flooding were occurring, especially in low lying and/or poor drainage areas. As a result of the heavy and torrential rain that was falling, the horizontal surface visibility was near zero.



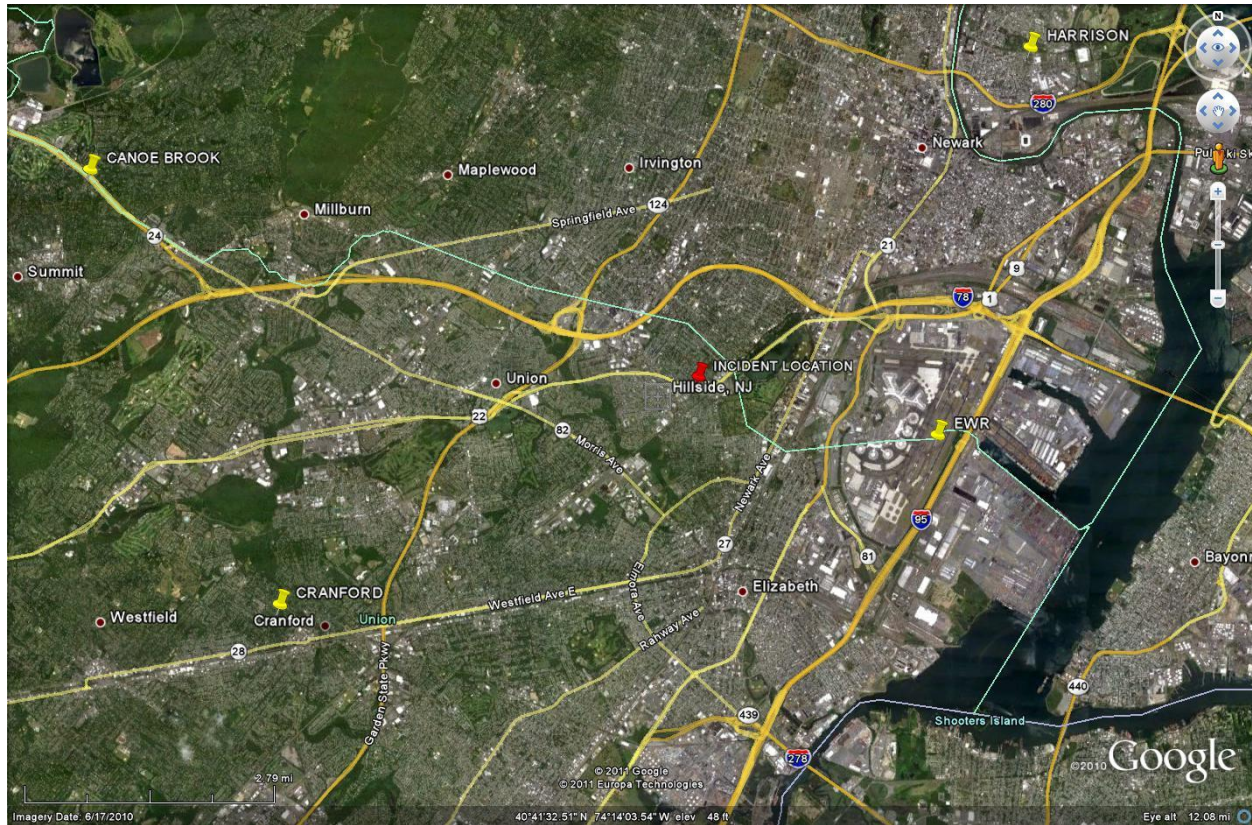
## CONCLUSIONS

In conclusion, it is my opinion that:

- No rain fell from 12:00 a.m. through 7:04 p.m. on June 14, 2008.
- Light, moderate and occasionally heavy rain fell nearly continuously from 7:04 p.m. until approximately 7:42 p.m. on June 14, 2008 as an area of strong thunderstorms moved across Hillside, New Jersey.
- The heaviest rain with torrential downpours occurred over the accident location between 7:10 p.m. and 7:40 p.m. on June 14, 2008 (including the time the motor vehicle accident occurred).
- The National Weather Service issued a “Flash Flood Warning” that was in effect from 7:15 p.m. through 8:30 p.m. on the day of the incident and stated that flooding was occurring in some locations.
- Approximately 0.85” of rain accumulated between 7:04 p.m. and 7:42 p.m. on June 14, 2008 (time and date of the incident).
- At the time of the motor vehicle accident, the horizontal surface visibility was near zero,

the roads were wet, puddles were present and actively forming and areas of localized flooding were occurring, especially in low lying and/or poor drainage areas.

- It is my opinion that hydroplaning was occurring in some locations as a result of the ponding of water, localized flooding and heavy rain that was falling at the time of the accident.



After studying all of the available weather records and information listed above, I conclude that the findings, opinions and information given in this report are held and supported with a reasonable degree of Meteorological certainty.

By: \_\_\_\_\_  
**Howard Altschule**  
**Certified Meteorologist, President**  
**Forensic Weather Consultants, LLC**