



WEATHERWORKS

THE WEATHER TRACKER



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Hurricanes in the Mid-Atlantic: Don't Dismiss the Threat



We all know that the remnants of tropical systems have a great impact on our region, primarily due to the geography of the area. Much weaker versions of these storms provide heavy rain and some gusty winds. But can a hurricane or a strong tropical storm hold together and make a direct hit? Let's take a look at a few possibilities and statistics on this occurring.

As tropical systems move above the Mason-Dixon line, the direction of movement is generally South to North (due to the circulation of high pres-

sure that usually sets up near Bermuda). This along with colder ocean waters at higher latitudes, makes it difficult for a tropical storm or hurricane to make the journey into the Mid-Atlantic states. However **it does happen**, especially when the storm is moving rapidly. The chances for a hurricane to directly hit the area are generally between 0.5% and 1.5% each season. That would average out to once every 100 years. Ironically, it has been just over 100 years since a hurricane has hit the area (see the "Did You Know" at the bottom right).

Since 2000, approximately 10% of all Atlantic tropical systems have had at least some effect (heavy rain, wind, storm surge) on the New Jersey/Penn./Delaware/Maryland region. In an active

season, the threat for a system to affect the area increases significantly. It is important to keep a close eye on how the tropics will affect your work thru the season which lasts until November 30th.

Keep in mind that **Weather-Works** sends detailed forecast alerts for any tropical situation that may have an impact at your site (flooding, wind damage, etc.). **Our staff** would be on round-the-clock for any questions or updates that you may need.

Did You Know...

The last system to hit the area as a tropical storm was Floyd in Sept. 1999. It has been over 100 years since a hurricane made a direct hit (landfall took

Unique Thunderstorms in June

June 2007 was fairly typical weather wise. Temperatures averaged out near to a bit above normal. As for rainfall, southern areas tended to be below normal, while northern areas were above average.

This rainfall disparity was due in large part to the convective (Thunderstorms) nature of the precipitation. The triggers for thunderstorms this past month tended to be most numerous (and strongest) in northern portions of the Mid-Atlantic.

There were two thunderstorm outbreaks of particular note in June. First was the rather peculiar setup on June

12th and 13th. There was a high to the west, and a nearly stationary large storm spinning over the western Atlantic. This caused a northeast to southwest flow in the atmosphere which caused storms that developed to move accordingly. Furthermore, since the flow was off the ocean, there was no haze or other obstructions to visibility as often occurs in the region when thunderstorms develop. This allowed for spectacular views of the thunder clouds for miles around, something similar to what is commonplace in the Plains States.

On the 27th, coinciding with a mini-heat wave there was a



Thunderstorm over Somerset Co., NJ 6/12/07

round of severe thunderstorms that brought locally heavy rainfall to areas north and east of Philadelphia where up to 2" of rain fell. In addition, strong winds and frequent lightning occurred. In Sussex Co., NJ there were nearly 1,300 cloud to ground lightning strikes in just a few hours.

Wild Weather Images!

Severe weather over the past month has created some rather interesting weather images. Click **HERE** to see some more pictures captured by our staff members



July 2007 Preview

With the arrival of Independence Day, the real days of summer are here. So far the only taste of true summer weather came in the last week of June with a three day period of decent heat and humidity. This is likely a sign of things to come.

Current indications are that temperatures will be near to above normal for the month ahead. This will likely translate into a Bermuda High which will support a warm, moist southwesterly flow. As a result, expect a heat wave or two during the course of the month. Ac-

companying those days of 90 degree plus heat will likely be a few of those classic summer nights featuring lows in the 70s, high levels of humidity and little if any wind.

As for precipitation in July, expect near normal rainfall for the month. This was the case in June, when the vast majority of rainfall came from thunderstorms. Therefore, there will

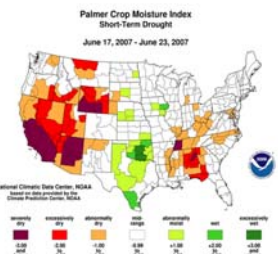
Did You Know...

The Peak of the Severe Thunderstorm Season in the Mid-Atlantic is July 16

likely be significant variation of rainfall amounts across the area.

Now that July is here, some attention must be turned towards the tropics. Even though July is not favored for many tropical storms or hurricanes, it only takes the remnants of one system (not necessarily a hurricane) to make a landfall across somewhere in the Southeastern U.S. and track northward to potentially raise rainfall amounts in the Mid-Atlantic substantially.

Website of the Month



NOAA U.S. Drought Indices Homepage including the Palmer, Crop Moisture Indices & More

Newsletter Update!

Starting with this month's issue, we are happy to announce that a whole new webpage has been created for *The Weather Tracker!* On the webpage you will find links to the current edition of the newsletter as well as an archive of back issues.

Also, based on YOUR feedback, we have created a **PRINTER FRIENDLY** version of our newsletter, including issues in the archive.

Simply click **HERE** to visit the Newsletter and Archive page.

UPCOMING EVENTS

- July 4 Independence Day
- July 16 Peak of Severe Weather Season
- July 28 Open House at Rutgers Gardens (New Brunswick)

WeatherWorks Custom Services

Although it is hard to think of Winter and snow when the Summer season began only a couple weeks ago, we all know how quickly it does sneak up on us every year. For over 21 years, **WeatherWorks "Your Weather Experts"** have provided municipalities, contractors and property management companies with services which range from weather consultation, daily forecasts, alert services, Certified Snowfall Totals as well as real time weather

data. Some of the questions to consider whether your company is covered in terms of weather this Winter is the following: Do you have access to a **meteorologist 24/7** for on-site or quick decisions? Do you suffer from **lower profits** due to standby time prior to a storm? How do you handle **overnight "surprise" events** and have you occasionally missed some throughout the years? How do you determine when to bring on your crew and **allocate equip-**

ment effectively during the most critical or intense portion of the storm? As many of you know, these are just some of the questions that WeatherWorks can effectively answer for you this Winter. We like to hear your thoughts so if you have any suggestions for the upcoming season or would like pricing and a proposal on additional services, call us at 1-800-427-3456 or **EMAIL** at any time. Enjoy the Summer!

Monitoring Drought



In the Mid-Atlantic, summer can provide for some long duration dry spells or periods of copious tropical rainfall. As such it is a good idea to know how much moisture your plants and grasses have to work with. Keeping track of rainfall yourself is a good start, but other factors such as soil moisture and evaporation also

need to be taken into account. Luckily, climatologists have spent years researching moisture and drought and have developed useful, easy to understand tools to help you to determine your plant life's needs.

There are two major indices that are used, the Palmer Drought Index (PDI) and the Crop Moisture Index (CMI). The PDI is most useful for long term applications, while the CMI uses shorter time scales, thus showing more week to week variability based on local conditions. The scales used for both

are simple: negative numbers indicate unusual levels of dryness and positive numbers show wetter than usual conditions. The bigger the number, the more extreme the situation. Be sure to check out the **"Website of the Month"** for a great website to keeping track of these indices.

BEWARE: these indices are for "climate regions" which typically include parts of 5-10 counties. The indices may not take into account localized precipitation events such as a drenching thunderstorm.