**WINTER STORM SUMMARY FOR**
**DECEMBER 09, 2005 TO DECEMBER 9, 2005 EVENT**

**Synopsis**

A very quick moving winter storm affected most of the Mount Holly forecast area during the first half of the day on December 9th. The winter storm was caused by the combination of a vigorous upper low from the Midwest and a Gulf of Mexico connection of moisture and low pressure systems. Two low pressure systems formed, one in response to the upper system in the Ohio Valley and one in the northeast Gulf of Mexico on Thursday the 8th. On Friday morning the 9th, the Ohio Valley low pressure system moved into the Great Lakes and the Gulf of Mexico low pressure system moved to the North Carolina Coast. A third low pressure system formed in response to the vigorous upper level on the Delmarva Peninsula. Above the surface a vigorous low level jet was pumping in warmer (above freezing) air across Delmarva and central and southern New Jersey. The low pressure system along the Delmarva Peninsula became the primary low as both the Great Lakes and North Carolina Coast lows weakened. The Delmarva low rapidly intensified during the day on Friday the 9th. It went from 1009 millibars just west of the Long Island Buoy at 10 a.m. EST on the 9th, to a 996 mb low just south of Rhode Island at 1 p.m. EST on the 9th to about a 988 mb low between Massachusetts and Nova Scotia at 7 p.m. EST. At 7 a.m. EST on Saturday the 10th, the low was at least 979 mb just south of Newfoundland. In 24 hours the low deepened by about 36 mbs! The quick movement and the late intensification (for the Mt. Holly CWA) prevented heavier precipitation from occurring.

**Watches/Warnings/Advisories**

A winter storm watch was issued with the afternoon forecast package on Wednesday the 7th for the entire Mount Holly CWA except for Cape May County New Jersey and Sussex County Delaware. A heavy snow warning was issued at about 5 a.m. EST on the 8th for northwest New Jersey, the Lehigh Valley, Berks County and the Poconos. At the same time a winter storm warning (for heavy snow and/or sleet & freezing rain) was issued for the greater Philadelphia Metropolitan area and the Raritan Basin in New Jersey. Most of the remainder of Mount Holly's part of Delmarva and eastern New Jersey was placed under a winter weather advisory for lesser amounts of snow along with the expected freezing rain and sleet. No advisories were in effect for coastal Sussex County Delaware and Cape May County New Jersey. Most of the counties under the winter storm warning verified with an approximate 24 hours of lead time before the criteria was met. In addition, ice accretions reached or exceeded one-quarter of an inch (warning criteria) in parts of interior southeastern New Jersey that were under a winter weather advisory.

**Precipitation/Temperatures/Winds**

Across all of northwestern New Jersey and most of Eastern Pennsylvania (except around the local Philadelphia area) snow overspread the region between 1 a.m. and 4 a.m. EST on the 9th. Around and just before daybreak in Pennsylvania and during the morning commute in New Jersey, heavy snow fell with accumulation rates as high as three inches per hour reported. The snow ended between 8 a.m. and 11 a.m. EST. Accumulations averaged between 6 and 10 inches with higher amounts (around 12 inches) in the Poconos and Sussex County, New Jersey. From northern Delmarva, the nearby Philadelphia area in Pennsylvania and all of its New Jersey suburbs as well as the eastern Raritan Basin, precipitation began around 3 a.m. EST and ended by 11 a.m. EST. Enough warm air aloft arrived to cause a mixed precipitation event. This part of the storm resembled more a late winter storm (aside from the ice) in which precipitation intensity dictated precipitation type. As precipitation rates increased, heavy wet snow fell, as it lessened precipitation went back to freezing rain and/or sleet. Snow, sleet and ice accumulations average 2 to 6 inches with the highest amounts in central New Jersey. Across the rest of Delmarva and eastern New Jersey, less snow fell and more sleet and freezing rain occurred. Around a quarter inch of ice accrued in parts of southeastern New Jersey. This is more typical of a December event in these areas as the relatively warm ocean (still 50 degrees just offshore) and the low level jet were able to bring in warm air aloft above the ground. As the winter continues and the nearby oceans cool further, the likelihood of this occurring diminishes with time. Right along the immediate coast, mainly rain occurred.

**Significant Impacts/Aspects**

Since the heavy precipitation fell during the morning commute, it made it extremely difficult. Many schools never opened. As the day wore on, the combination of ice and wind gusts to 30 to 40 mph tore down some limbs in New Jersey and caused isolated power outages.

**Notes**

Information contained in this summary is preliminary. More complete and/or detailed information may be contained in subsequent monthly NOAA storm data publications. Many thanks to our cooperative and Skywarn spotters who gave us over 200 reports of snow and ice on December 9th!