The first meeting of the Metro Atlanta AMS/NWA Chapter for the 2010-2011 year was held on September 9, 2010 at Barnes and Noble at Tech Square. Thirty people were in attendance for the meeting.

Kent Frantz, President, welcomed everyone to the first chapter meeting of the year and introduced the other offices (James Belanger, President-Elect; Sean Miller, Treasurer; and Jessica Fieux, Secretary). In addition, Kent had each attendee introduce themselves providing their name and affiliation.

Three guests speakers at the meeting discussed “The Epic Floods of September 2009 in North Georgia: One Year Later.” Kent Frantz, President of the chapter and Senior Service Hydrologist at NWS Peachtree city, started the presentation with a perspective from the National Weather Service. An upper level low over Texas was dominant for a few days leading up to the event and helped to feed tropical moisture into Georgia – thus the ground was moist and some flash flooding was experienced across the Southeast during the week prior to September 21. With the low level southerly flow across Georgia, the rainfall was enhanced across the flooded areas due to upslope. In addition, the FFC sounding showed a moist adiabatic profile with decent instability (~1500 J/kg). Another factor that played a role in the flooding event was a boundary from the coast that worked its way westward into the Atlanta metropolitan area. The 18-hour rainfall total at 9am on September 21, 2009 was 16 inches across portions of Douglas County. This epic flood event was a greater than 1000 year flood. The flooding caused a total of 10 deaths across North Georgia, nearly 100 water rescues and more than $300 million dollars in damage. All of the deaths except for one occurred overnight and all except for two deaths involved an automobile. A few of the lessons learned by the National Weather Service in Peachtree City were shared. First, it is important to have the rainfall frequency chart readily available. Second, when issuing river flood warnings (FLW) include major in the headline, i.e. major flood warning, to help emphasize the severity of the event. Another lesson learned was to inform emergency managers when stream gages fail. Since 20% of the stream gages failed during this event, other methods need to be in place to take stream height measurements – one option is to install staff gages. In August 2010, one such staff gage was installed at Sweetwater Creek where a record crest of 30.8 feet occurred during the September 2009 flood.

The second guest speaker, Brian McCallum from the United States Geological Survey (USGS), was involved in documenting the extent of the flood. In addition, the USGS was also responsible for fixing the stream gages that failed during the event. The USGS has 324 surface water gages in Georgia, 257 of which have rain gages. These gages transmit hourly through the GOES-8 satellite. The importance of these gages spans a variety of reasons: flood warnings/forecasting, flood control, drought monitoring, state water planning, water wars, safe bridge and roadway design and more. By Monday afternoon (September 21), almost 50 stream gages were above the highest point ever measured before and by that evening, more than 15 stream gages were not reporting. Since many stream gages failed, the USGS had to go out into the field to take measurements and fix the stream gages. Within five days of the flooding, USGS crews made nearly 75 discrete flood measurements, flagged high water marks at approximately two dozen
locations and repaired or installed temporary real-time gages at all 20 destroyed gages. 16,981 dwellings were impacted from this epic flood (FEMA) and 3,482 businesses were impacted (SBA). Similar to the NWS, the USGS also shared lessons learned from the event. First, the gages did their job. Second, investments in stream gage networks paid off. Lastly, there is still room for improvement regarding the communication of flood threat/risk. The USGS has a variety of tools to monitor flooding:

- Water Watch - [http://water.usgs.gov/waterwatch](http://water.usgs.gov/waterwatch)
- Water Alert - [http://water.usgs.gov/wateralert](http://water.usgs.gov/wateralert)

The last speaker of the evening was Jason Milhollin, Douglas County Emergency Manager. Douglas County received the most rainfall from the epic flood event and was one of the counties that sustained the most damage. At one station, over 21 inches of rain fell in a 24 hour period, with a peak rainfall of 5.53 inches in one hour. Over 130 sections of the roadway infrastructure were closed during and immediately after the flood event and only two roads remain closed today. At one point there was no way to get in or out of the county and Highway Five was the only road that allowed for north/south travel within the county. In total, there was more than 30 water rescues from cars (does not include rescues from houses), seven fatalities in the county, and over 968 tons of debris. Debris removal of a vehicle was a challenge and Blackhawk helicopter had to be used to remove the car from the water. Similar to the two other speakers, the EMA shared lessons learned from Douglas County. The county did not know the National Weather Service needed information from the county and has since learned the importance of sharing information. In addition, it is important to share information with the media so it can be passed along to the public. Since the public is accustomed to moving to the lowest level of their home when outdoor warnings sirens alert, the decision was made not to sound the sirens as the county did not want people going to the lowest floor, instead people needed to seek higher ground. In order to be able to alert citizens, the county now has a reverse 911 system to notify residents of dangerous situations. During the epic flood a makeshift EOC was used and the county is now in the process of making a permanent EOC. Another challenge during the epic flood event was the fact that there were not enough boats available. One Douglas county resident attending the AMS meeting passed along some positive praise – it was helpful that the county posted a road closure map on their website.

Kent Frantz presented Brian McCallum and Jason Milhollin with an AMS mug to thank them for sharing their experiences with the AMS/NWA members. He then concluded the meeting.

Next meeting: Thursday, October 14, 7pm at Barnes and Noble Tech Square – James Belanger will speak on “Tropical Cyclone Predictability and a Review of the 2010 Hurricane Season”