STATEMENT OF RICK DAY, SENIOR VICE PRESIDENT FOR OPERATIONS, AIR TRAFFIC ORGANIZATION, FEDERAL AVIATION ADMINISTRATION, ON CENTER WEATHER SERVICE UNITS, BEFORE THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY, SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT, JULY 16, 2009.

Chairman Miller, Ranking Member Broun, Members of the Subcommittee:

Thank you for inviting me here to testify about the status of Center Weather Service Units (CWSU). As this is my first opportunity to testify before this Subcommittee, I would like to take just a moment to introduce myself. My name is Rick Day, and I am the Senior Vice President for Operations for the Federal Aviation Administration's (FAA) Air Traffic Organization (ATO). As Senior Vice President for Operations, I oversee the safe and efficient delivery of air traffic services provided by the FAA. My career with the FAA began 35 years ago as an air traffic controller at the Cleveland Air Route Traffic Control Center. I have first hand experience relying on CWSU forecasts so it is especially fitting that in my first appearance before you I will testify about the CWSUs and their future.

The FAA has had a longstanding, productive relationship with the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service (NWS). We want to continue to this relationship with a renewed focus of improved aviation weather forecasting.

A little history of our working relationship may be helpful. Aviation weather forecasting services have always been integral to safe and efficient operations within the National

Airspace System (NAS) and support from the NWS has been key. The formal arrangement by which the NWS now provides aviation weather services to the Air Route Traffic Control Centers (ARTCC) [1] originated with the NTSB recommendation issued on October 28, 1977, following its investigation of the crash of Southern Airways flight 242. The NTSB recommended that FAA develop rules and procedures for the timely dissemination by air traffic controllers of all available severe weather information to inbound and outbound flightcrews in the terminal area. To address this recommendation, the FAA entered into an Interagency Agreement with the NWS, to create CWSUs at each FAA ARTCC.

Today, CWSUs are located at each of the FAA's 21 ARTCCs throughout the United States. They are staffed by 84 NWS meteorologists, 16 hours a day, seven days a week. Typically, the CWSU forecaster on duty works with the ARTCC Traffic Management Unit (TMU), providing two scheduled weather briefings and updates throughout the day. The CWSU forecast is used in the development of the operational plan for air traffic, including runway configurations and routing traffic around significant weather.

The original Interagency Agreement with the NWS that established the CWSUs has been renewed a number of times since it was first entered into in 1978. The current agreement will expire in September of this year but we expect to execute the agreement's one-year extension option to continue the existing CWSU operations through September 2010.

[1] ARTCCs provide air traffic control services to aircraft operating on instrument flight rule (IFR) flight plans within controlled airspace and principally during the en route phase of flight. When equipment capabilities and controller workload permit, certain advisory/assistance services may be provided to visual flight rule (VFR) aircraft.

Over the last several years, the FAA has been exploring opportunities to improve safety and efficiency within the NAS and capitalize on technological improvements that have emerged over the last 30 years since CWSU operation began. Technological improvements have changed the way in which weather information is generated, disseminated and used. In addition to the change in technology, we found that the CWSUs were not providing the same level of services at all of its locations, and the services and forecasts were not standardized across the 21 locations. There was also little collaboration or communication between the different CWSUs. In addition, neither the FAA nor the NWS had a formal quality assurance program for CWSU products and services. To this end, in 2005, the FAA asked the NWS to examine different service methods to provide improved, consistent and continuous (24 hours per day, seven days per week) weather support to ARTCCs. In response to this request, the NWS submitted a restructuring proposal in October 2006. In April 2007, the FAA declined this proposal because we were in the process of an internal requirements review. We completed that review in late 2007.

Following this review, we refined our requirements for services provided by the CWSUs because our existing requirements were too broad to ensure the efficiency and cost effectiveness of the services. Also, as GAO found, FAA did not have a system in place to gather information about the effect of forecasts on delays and diversions in the NAS.

In December 2007, the FAA asked NWS to provide a new proposal based on more narrowly tailored requirements for the future weather forecasting needs and the need for performance evaluation. Our requirements included 24-hour, 7-days-a-week staffing, standardized services to promote consistency in service delivery across the NAS as well as NAS-wide monitoring and a new Terminal Approach Control (TRACON) forecast that provided higher resolution information for 10 of our busiest TRACONs. The FAA also asked that NWS outline three different service methods to meet these requirements using (1) the existing CWSU configuration at 21 ARTCCs; (2) a reduced number of CWSUs; and (3) one centralized weather facility. NWS responded with three proposals, each of which had some innovative ways to meet our requirements, however we did not accept any of them because the costs were too high for each alternative compared to the current cost of the program.

In September 2008, the FAA advised the NWS that we preferred the single weather center solution but recognized the need for back up and requested the NWS refine their proposal. Safety and efficiency have always been and will continue to be the driving forces behind any improvements to the CWSU service. We received the NWS revised proposal last month. Currently, the FAA has a team assessing the proposal and we expect to have the assessment completed in early August.

Although our assessment of the NWS proposal is not complete, with a two weather center approach, we see an opportunity to improve aviation weather forecasting services in the near term. The agency expects the two center approach to provide finer resolution and

more consistent and accurate forecasts that will improve the safety and efficiency of traffic flow through the National Airspace System 24 hours a day versus the 16 hours currently covered. This consolidated CWSU model would also allow meteorologists monitoring the NAS to dynamically allocate resources to areas with "active" weather conditions, having the most impact on aviation operations.

We understand that there may be some concern about providing weather services "remotely". We think this concern is unfounded because we have considerable experience with remote weather briefings. Today, CWSUs provide remote support to TRACONS and select towers just as Flight Service Stations provide remote weather briefings to pilots. In addition, providing weather services using this model is consistent with centralized weather operations used by NavCanada, Eurocontrol, and the U.S. Department of Defense as well as the airlines.

Further, CWSUs will not be the only source of aviation weather information for FAA's air traffic operations. NWS would continue to have, at any one time, approximately 130 meteorologists providing meteorological watch and issuing forecasts for parts of the NAS from its weather forecast offices and the Aviation Weather Center providing terminal and enroute forecasts.

The current requirements for the CWSUs to provide "consistent" information will also help move aviation weather services towards the FAA's future needs envisioned for the Next Generation Air Transportation System or NextGen. One key concept of NextGen is

a common operational picture of weather information for all air traffic management decisions. This concept is already being put into practice through the Collaborative Convective Forecast Product (CCFP). Several years ago we asked the NWS to develop and provide the CCFP based on user feedback that there were several convective forecasts available, often providing different answers. FAA needed a "common operational picture" of convective weather on which to build the air traffic management plan. The CCFP provides this common forecast of convective weather. It is developed from collaboration among meteorologists from CWSUs, the Aviation Weather Center, Meteorological Service of Canada, and the airlines. FAA and NAS stakeholders now rely on the CCFP as the primary forecast product for NAS-wide operations planning, during the convective season. Consistent with the NextGen Concept of Operations, we need a common operational picture of all weather elements that impact air traffic.

In the time since the GAO's January 2008 evaluation of weather services provided by CWSUs, we have taken steps to address GAO's recommendations for establishing standards by which to evaluate CWSU performance. We have already established standards for participation in the development of the Convective Forecast, when convective weather is expected to occur within that specific ARTCC domain; consistency of CWSU product formats, information content, and procedures for issuance, across all CWSUs; and, provision of on site or back up daily services 16 hours per day, seven days per week. We began base-lining these performance standards with the NWS during site evaluations we started this year. We have also established a standard for accuracy of forecasts used in decisions for traffic management initiatives. The metric that results

from this is being developed jointly by FAA and NWS. This metric will take a little more time to refine, but we believe that building on a developing tool called the Weather Impact Traffic Index, which translates weather and weather forecast impact on air traffic, will help us in these efforts.

As I mentioned, the NWS and the FAA are also in the process of conducting a new series of site evaluations. As of June, we had evaluated 13 of the 21 CWSUs and expect to complete the remaining site evaluations by September. So far, we have found what previous FAA, NWS and GAO reports have documented: a lack of standardization in CWSU services. Having said that, we have also found that CWSUs are well integrated into air traffic management operations. We have also found positive dividends from new FAA and NWS initiatives. Specifically, NWS has provided all CWSUs with a common tool set--standardized technology, collaboration and training--which is producing improved and consistent service. The FAA has funded a hardware and software technology upgrade of the AWIPS Remote Display (the standard meteorological workstation used by the NWS) which has improved system performance and weather information availability because it provides faster, more effective manipulation of forecast data.

In conclusion, we are very hopeful about the benefits of the NWS proposal. However, I want to assure you that our assessment of the NWS proposal is not the final consideration prior to implementation. Let me be clear – we will not change the current configuration until a demonstration and validation show we are able to effectively disseminate the most timely and accurate weather forecasting for the safe operation of flights in our system.

We will work with the NWS to plan, execute and evaluate the demonstration and validation to prove whether the consolidated CWSU model will be able to provide on-demand services remotely. In addition, we understand that the Board on Atmospheric Sciences and Climate of the National Academy of Sciences has agreed to oversee the demonstration and validation, providing an independent assessment of the consolidated CWSU model. We also expect the NTSB to contribute to the demonstration and validation by participating in the independent review. Finally, during the demonstration and review, we expect to develop the data necessary to assess, in quantitative terms, the improvements we have identified.

We have an opportunity to couple the art and science of aviation weather to reduce the impact weather has on aviation and increase the safety of operations. FAA and NWS will continue to learn and grow together as we move towards our common goal of improved aviation weather services.

Chairman Miller, Ranking Member Broun, Members of the Subcommittee, this concludes my prepared remarks. I would be happy to answer any questions at this time.