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## OVERVIEW AND OBJECTIVES

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Prepared for delivery by

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### Overview

Each of us has a stake in the safety and efficiency of our national aviation operations. Our National Airspace System (NAS) touches nearly every American in one way or another and is vital to our daily activities. We're all familiar with the needs to save lives, avoid injuries, and save money and time. Further, we're aware of the aggressive White House Commission goal of reducing the rate of fatal aviation accidents 80% by the year 2007. Improving aviation weather products and services and getting them to the user in a timely and mission tailored manner, improving provider and user training, and implementing sound weather decision making processes are all critical components in the effort to achieve this goal. Not even counting corporate flight operations or the small business person's beneficial use of general aviation, the aviation sector of our economy is well over 100 billion dollars. That's just in operating revenues – the collateral impact on our economy is staggering.

We've seen the headlines throughout the summer trumpeting the record number of delays attributed to weather. From the AP wire on June 16th, "A new system designed to improve the flow of air traffic during severe weather helped reduce delays by seven percent last month." But then on July 10th from Reuters, "June was a frustrating month to fly ..." and "there was a record number of delayed flights." And then there was a headline from the Washington Post that read: "Flying into a Storm of Delays." These delays are clearly in the minds of the American public. Most of us in this room are working on solutions to mitigate the portion of the overall delay problem attributable to weather. While much of the focus is on commercial carriers, we cannot overlook the fact that, in data taken from the Air Safety Foundation's Nall Report, weather has consistently been listed as a cause in one-fifth to one-third of fatal general aviation accidents. This complex problem requires a coordinated effort to reach a solution. And the National Aviation Weather Program is committed to this effort.

The aviation weather community has made significant progress in a wide array of areas: (1) new computing power and better models; (2) new visualization techniques; (3) better communications, and (4) new cockpit displays, including satellite-linked systems to fit in small general aviation aircraft. However, we have not yet reached all of our objectives. Gaps in either knowledge or action still exist. We need to address how we fill those gaps within the bounds of time and resources. There are many opportunities for aviation weather service improvements in product development and dissemination, cockpit displays, decision support systems, and provider and user education and training. These are the areas we will focus on during the next 2 days. Some improvements have already been implemented and others are on

the verge of implementation. Although much remains to be done, we are pleased to have the participation of both the public and private sectors.

The Office of the Federal Coordinator for Meteorological Services and Supporting Research, or OFCM for short, has the following mission: “To ensure the effective use of federal meteorological resources by leading the systematic coordination of operational weather requirements, services, and supporting research among the federal agencies.” It is our office that spearheaded the publication of the “National Aviation Weather Program Strategic Plan” and its implementing document, the “National Aviation Weather Initiatives.” Through the Federal Coordinator, the National Aviation Weather Program Council (NAWPC), made up of top-level aviation weather stakeholders from federal agencies, oversees a Joint Action Group for Aviation Weather (JAG/AW). The members of both these groups are shown in the inside front and back covers of the forum program.

Since the publication of the “Initiatives” document in 1999, we have been assessing agency activities within the framework of the initiatives to determine progress made, where programs are planned, where we have overlaps, and where we have gaps. We have characterized our effort as a 4-tier planning process, which Dr. Frances Sherertz from the FAA will describe in more detail. Tier 1 gave us the “Strategic Plan”; Tier 2 gave us the “Initiatives Document”; we are working Tier 3 (Service Design) and Tier 4 (Budget and Schedules) concurrently. These efforts have been a great start and we must continue our efforts to complete the picture. To do this, we will depend on our users and industry partners to innovate and develop techniques, processes, and systems, all of which fall within the framework of the initiatives. The information gathered in this forum will help bring Tier 3 and Tier 4 to closure, thus putting a structure in place for moving into the future in a continuing effort.

### Objectives

You can see we have a large task before us. But we have a diverse group of leaders in aviation weather here with us and we look forward to your presentations and discussions. There are four overarching objectives for this forum. They are:

- To highlight programs/processes which have been implemented recently, or are ready now for implementation.
- To identify ongoing programs which show promising results, and must be supported with continuing resources to reach fruition.
- To determine gaps where no work is ongoing or planned.
- To identify overlaps and assess them.

We have representatives from numerous federal agencies present. We have commercial weather service providers here and we have meteorologists, pilots, air traffic controllers, flight service specialists, dispatchers, aircraft owners, researchers, engineers, educators, and safety experts with us today. Thank you for taking the time to participate in this forum. We’re all here with one huge goal and that is to take a hard look at where we are now and where we need to go.

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## The Four-Tier Planning Process

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Prepared for delivery by

**Dr. Frances Sherertz**

*Deputy Program Director, Aviation Weather,  
Federal Aviation Administration, and  
Chairperson of the Joint Action Group for Aviation Weather*

I'm really pleased to be here to listen to this update on the work that the government, as well as the industry, has done on all these important efforts that really were done on your behalf and on behalf of the public.

The long and steady improvement in aviation safety that we enjoyed in the mid 80's and the early 90's has, frankly, "plateaued out". The 1997 White House Commission admitted that most of the problem areas have been addressed and that most of the technological exploits have been covered. Only through government and industry "holding hands", would we really get hard and residual improvements.

Weather and its effects impact both safety and efficiency of the national aerospace system. In the safety arena, most of the fatal accidents occurred in general aviation. So that's where most of our effort is going to have to be, particularly in terms of training and decision making. Efficiency improvements are primarily oriented to the air carriers and we have a lot to gain through finer, faster, and more user-oriented forecasting.

The initial work of the Joint Action Group (JAG) started out under the umbrella of OFCM in 1996. The progress of this group has been kind of slow but it has continued steadily.

The general process that we used focused on assessing where we are -- or were -- in 1996 and 1997, developing a global idea of what general sorts of problems should be addressed, then construction of detailed plans for addressing them. And finally, the initiation of actions by all of us -- both government and industry -- to make it all come true. Elements contained in this work are also contained in the independently derived efforts of the FAA's "safer skies" initiative.

This is a four tiered process. Tier one began in late 1996. Fortunately, with the JAG, we didn't have to jump the hurdle of whether or not weather -- per se -- causes accidents. Frankly, this is a persistent issue in the minds of the public and we need to help them get across that -- to get across the fact that weather, in and of itself, does not cause accidents. Since judgement can't be legislated -- "ya all don't crash that helicopter now, ya hear", collectively, we're going to have to create a better weather reporting and forecast to assist pilots, dispatchers, and controllers to make better and more timely weather decisions. And we're going to have to design and manufacture better aircraft. The result of that

effort was the publication in 1997 of the National Aviation Weather Program Strategic Plan.

Tier two was a matter of getting to the details. To develop specific things that needed to be done in several areas and then to prioritize them according to their contribution either to safety or efficiency. The priority setting was very heavily weighted on the side of the air carrier operations. The result of tier two was the publication, in early 1999, of the National Aviation Weather Initiatives.

Tier three and four are proceeding concurrently and occupy the present moment. The focus of tier 3 is to identify who's doing what, from the tier two activities, and then to find holes that need to be worked on. Some of the projects require long-term infrastructure, development, and capital investment planning. Others are non-material solutions such as procedures or scientific research.

Tier 4 is where the "rubber meets the runway": budgets and schedules. In tier 4, we have to actually secure the financial resources, allocate the personnel and fiscal resources, and establish and track schedules. On the government end, it will be necessary to continue to compare notes about who has been successful with what and to ask our industry compatriots to stick up for us up on Capitol Hill in the budget process. We'll need to have an ongoing reconciliation process and some ability to transfer tasks from one agency to another when that seems to make sense. OFCM will be a pivotal player in the successful execution of those transfers. Longer term, meaning 3 to 5 years out, and I know that sounds short, but at the speed of some of the research and technology issues, 3-5 years is a really long time.

But 3-5 years out, we're going to have to start that process, where we were in 1996, we're going to need to start that all over again. The actual weather will be the same, of course, but the aircraft, and the pilots and their training and the controllers and their training will have changed a lot. Widespread use of Global Positioning System navigation will mean that the old systems or air routes will no longer be viable. The FAA and the NWS will need to interact with system users in a very different way. Pilots, who will then be mostly flying all direct, will require different weather support than they do now, different products and different delivery systems. Controllers will have to have different procedures. And everyone will need a different type of training than what we are developing now today. So in 3-5 years it'll be déjà vu all over again.

Thank you for your help and your continued support.