CHAPTER ONE

INTRODUCTION

In 1995, the National Research Council (NRC) issued a report entitled, *Aviation Weather Services: A Call for Federal Leadership and Action.* A major recommendation in the NRC report was for the federal agencies to develop an integrated plan specifying the actions needed to achieve an improved aviation weather system. Responding to this recommendation, the National Aviation Weather Program Council (NAWPC) tasked the Joint Action Group for Aviation Weather (JAG/AW) to draft a strategic plan that established a vision and objectives for realizing an improved aviation weather system. Following approval of the strategic plan in April 1997, the JAG/AW was tasked to draft an implementing document. This effort culminated in January 1999 with the NAWPC's approval of the *National Aviation Weather Initiatives*. The *National Aviation Weather Initiatives* contained initiatives in eight service areas that if implemented would likely improve the delivery of weather services to the users of weather information and ultimately lead to reducing the rate of aircraft accidents attributable to weather.

To establish an overall framework for improving aviation weather services, the JAG/AW adopted a four-tier process. Tier 1 was the *Aviation Weather Strategic Plan*, Tier 2 was the *National Aviation Weather Initiatives*, and Tiers 3 and 4 called upon the agencies to realign existing programs or initiate new programs to satisfy the initiatives as well as develop funding profiles and establish schedules.

To determine progress with implementation of the aviation weather initiatives, the Office of the Federal Coordinator for Meteorology (OFCM) conducted a review of existing and planned Tier 3/4 programs. The programs were mapped against the aviation weather initiatives and the results published in the April 2001 Tier 3/4 Baseline Report. For analysis purposes, the initiatives were divided into three categories: (1) Initiatives with no agency match, (2) Initiatives with a single agency match, and (3) Initiatives with more than one agency match. An observation from this analysis was that work on some of the training initiatives was limited and that a more coordinated approach should be taken to ensure users of aviation weather information were knowledgeable about the impacts of weather on their operations.

This was not a new finding. The need for training was identified in past reports, plans, and user fora. The 1992 *National Aviation Weather Program Plan* cited the need for improved and updated user education. The National Research Council's two reports dealing with aviation weather services, *Weather For Those Who Fly* and *Aviation Weather Services: A Call for Federal Leadership and Action* called for improved training for users and providers of aviation weather information. More recently, the *National Aviation Weather Initiatives* articulated service area-specific training initiatives for users and providers of aviation weather information, and the Aviation Weather User Forum in July 2000 called for the development of a comprehensive National Aviation Weather Training Program.

Although progress has been made toward improving training programs for both users and providers of aviation weather information, accident statistics, especially for general aviation, indicate that a lack of knowledge about weather and its impacts on flying continues to be a contributing factor in aircraft accidents. Also, given the introduction of a number of new systems for observing, processing, disseminating, and displaying weather information, users, especially pilots, need training in order to fully exploit new system capabilities. Therefore, there are really two training parts to consider. One part deals with training designed to provide basic education for users and providers of aviation weather information. The other part deals with training associated with programs that develop new systems, products, etc. Both are important since basic training provides the knowledge needed to operate safely in all-weather conditions and the training for development programs facilitates the transition to operations. Together this training must lead to a better understanding of how weather impacts the aircraft and the ability of the pilot to make sound decisions in light of new technologies.

In gathering information for the Tier 3/4 Baseline Report, the respondents were asked to provide some information about the type of training being included in the program development. However, given the added emphasis on training, it was decided to write a separate report that focused on the training initiatives in the *National Aviation Weather Initiatives* as well as the training associated with each Tier 3/4 program. For this purpose, a separate template was developed and provided to the agencies with Tier 3/4 programs (Appendix A). The main parts of the template are (1) Training Requirements, (2) Training Development and Delivery, and (3) Training Identification and Description. Each part of the template contains parameters and for each parameter there are descriptors for selection by the responder. The parameters include such things as intended trainees, skill level of trainees, level of training required, status of training development, and method and resources for delivering the training.

Based on the training information provided for each of the Tier 3/4 programs, assessments have been made for several areas. These areas include: (1) how well the training parameters are being met, (2) the status of the training-specific initiatives in the *National Aviation Weather Initiatives*, (3) the role of training in Tier 3/4 program development and transition to operations, (4) the training needs of users and providers, and (5) the opportunities for leveraging among the agencies. This report presents the information gathered for each program, provides the results of the analyses and assessments, and highlights potential leveraging opportunities and areas where more work may be needed.