U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Severe Weather Avoidance Plan (SWAP) **Date:** 4/1/85 **Initiated by:** ATO-410 **AC No:** 90-85 **Change:**

1. PURPOSE. This advisory circular is issued to provide users of the air traffic system with background and pertinent information relating to the Severe Weather Avoidance Plan (SWAP).

2. EFFECTIVE DATE. April 1, 1985.

3. DISCUSSION.

a. The first SWAP was developed in 1971 by joint industry/FAA personnel in an effort to minimize severe weather problems. The SWAP was designed to employ techniques to provide sufficient airspace for pilot deviations, adjust traffic flows commensurate with the controllers capacity to separate traffic, and to select routes which provided the best chance to avoid severe weather. Concepts were applied in the use of meteorology in the ARTCC, use of remote weather radar receivers, and the use of the Central Flow Control meteorologist.

b. SWAP can be of considerable value in areas that are particularly susceptible to thunderstorms. Plans that are properly developed, coordinated, and implemented, can reduce coordination and flow control restrictions, resulting in better utilization of available airspace and reduce the extreme delays frequently associated with severe weather.

c. The success of SWAP is dependent upon the development of "preplanned" alternate routes to accommodate arriving, departing, and over traffic so that a balanced traffic flow is sustained. Such plans will provide for limited, or extensive reroutings and be developed in consideration of the typical movement of severe weather in a particular region.

d. A SWAP will be developed where there is an operational need. Some areas are not particularly susceptible to thunderstorms and experience may indicate that some air route traffic control centers (ARTCC's) have sufficient airspace available to permit pilot deviations during normal operations. SWAP in such areas would be of relatively little or no value.

4. CONCEPT OF OPERATION.

a. The ARTCC Weather Service Unit (CWSU) meteorologist or weather coordinator will:

Gather and analyze available meteorological data specifically pertaining to the weather impact area and discuss the findings with other affected facilities as well as the Central Flow Control Function (CFCF) meteorologist in Washington, D.C.

b. If it is decided to implement SWAP, the ARTCC Area Manager in charge will:

(1) Coordinate with Traffic Management Units (TMU's) when implementing SWAP procedures that affect other ARTCC's. If possible, this coordination will be completed at least 2 hours prior to implementation.

(2) Notify affected facilities within their areas of jurisdiction when SWAP will be implemented, including restrictions, reroutes, and affected times.

(3) Notify CFCF and affected facilities within the center of jurisdiction when normal routings can be resumed.

c. The Central Flow Control Function will:

(1) Prior to implementing the plan, conduct a conference call between all affected facilities, apprise them of the existing weather conditions, or advise them of the situation that indicates that routes will be impacted to the extent that rerouting is necessary to avoid thunderstorm activity.

(2) Issue an advisory to user and FAA facilities when implementing or cancelling the plan.

(3) Continuously monitor the operations in order to determine the need for other programs such as expanded quota flow/ground delays, that may be required to support SWAP.

d. SWAP advisories:

(1) Example of ARTCC SWAP advisory:

T/M Advisory

Due to the possibility of thunderstorms developing in short line or clusters south of MRB to North of SAX approximately 28 miles wide after 1900Z, SWAP /severe weather avoidance plan/ may be implemented after this time. All is predicated on movement of thunderstorms described above.

(2) Example of terminal SWAP advisory:

T/M Advisory

SWAP reroutes because of weather will be in effect for the next ____ minutes. Arrivals entering via ____ (fix or route), departures via ____ (fix or route).