

Minneapolis TRACON Collaborative Convective Forecast Product – Experimental Product Description Document

Part 1 – Mission Connection

1. Product/Service Descriptions:

The Minneapolis TRACON forecast product/service will be a collaborative effort by personnel of WFO Minneapolis, CWSU Minneapolis and initially, Northwest Airlines to produce a forecast of thunderstorm and/or lightning activity within a radius of 100 nautical miles of the center of the Minneapolis airport.

2. Purpose/Intended Use:

The TRACON forecast will be used as a Tactical Decision Aid (TDA) for short-term decision-making designed to improve the efficiency and safety of both incoming, and outgoing, air traffic within the Minneapolis TRACON area.

3. Audience/Users:

The anticipated direct users and purposes of use are:

Airline dispatchers – for decisions regarding flight fueling

Airline and FAA Air Traffic Managers – for decisions regarding traffic flow in and out of the TRACON area

The Airport Manager – for decisions regarding ground operations

4. Presentation Format:

The product will be issued 2 times a day; around 1515Z and 1815Z. Each product will consist of 5 color-coded images, each image will depict the one-hour maximum probability of thunderstorms/lightning (minimum of Level 2 composite reflectivity – 30dBz reflectivity). The color coding will be as follows:

Green – less than 30% probability of thunderstorms/lightning

Yellow – 30% to less than 50% probability

Orange – 50% to less than 70% probability

Red – 70% and greater probability

The area of coverage will be the area within a 100 nautical mile radius of the Minneapolis-St. Paul Airport (KMSP). The spatial resolution will be 5 km, based on the NDFD grids. The time resolution will be 1 hour. Valid hours/times for the product issued at 1515Z will be 16-17Z, 17-18Z, 18-19Z, 19-20Z and 20-21Z.

Valid hours/times for the product issued at 1815Z will be 19-20Z, 20-21Z, 21-22Z, 22-23Z and 23-24Z.

The final products will be posted on the following web site:

<http://www.crh.noaa.gov/zmp/tstmTDA.php>

Two samples of one-hour images are attached to this PDD.

5. Feedback Method:

An operational demonstration is planned to begin Monday, July 16 and run through Friday, August 3, 2007.

A user survey will be posted on the same web site (see above) as the TRACON forecast.

After August 3, an experimental product assessment will be conducted for a 60-day period ending October 2, 2007.

Changes will be made and suggestions for improvement will be incorporated into the experimental product to begin at a date yet to be determined. A user survey will again be posted on the CWSU web site.

Written comments may be mailed to:

National Weather Service, Central Region Headquarters
7220 NW 101st Terrace
Kansas City, MO 64153

Attn: Gary Schmeling

For more detailed information, contact Gary Schmeling at 816-268-3143

Part 2. – Technical Description

1. The Collaborative Process:

Preparation of the preliminary (pre-collaborative) Minneapolis TRACOM forecast will be the responsibility of CWSU Minneapolis personnel and will be derived from the National Digital Forecast Database (NDFD) grids. After CWSU personnel determine the preliminary TRACOM forecast, they will collaborate with personnel of WFO Minneapolis, pertinent FAA facilities (ARTCC, TRCOM, ACT) and, initially, Northwest Airlines. After this experiment, other airlines and entities may participate in the collaboration. The collaboration will be conducted via “GO TO MEETING” capability.

2. Training:

Two Training packages are being prepared – one for the producers (WFO, CWSU, Northwest Airlines) and one for the users (other airline personnel and FAA personnel).