CCFP
COLLABORATIVE CONVECTIVE FORECAST PRODUCT
Purpose & Overview of CCFP

- The purpose of the CCFP is to support strategic, system-wide planning that is intended to reduce traffic flow disruptions that may be impacted by convective weather during the next 2-6 hours.

- Weather related delays are a highly disruptive force within Air Traffic Control (ATC) systems.
Purpose & Overview, cont.

- CCFP attempts to reduce weather-related impacts by creating a common situational awareness and improving coordination and cooperation among participants.

- CCFP has been embraced by the FAA and US airline industry as the cornerstone of severe weather planning for US Airspace operations.
CCFP Background

- The 2006 convective season will be the start of the 6th operational CCFP
- CCFP is developed through a collaboration process between meteorologists
- All stakeholders have agreed that the CCFP is the primary weather forecast product for strategic planning on the Planning TELCON
CCFP: *What it is*

- CCFP is a strategic planning tool for the 2 to 6 hour time frame, which begins March 1 and runs through October 31.
- CCFP is a package of 3 forecast maps with lead times of 2, 4 and 6 hours.
- CCFP is updated every 2 hours, with the exception of 1 AM Eastern Time.
CCFP: What it is not

- CCFP does not forecast all convective activity
- CCFP forecast areas are not ‘no-fly zones’
- CCFP forecasts are not tactical short-term decision-aids (0-2 hrs)
- There are convective products that should be used for tactical decision making that include:
  - National Convective Weather Forecast (NCWF)
  - Integrated Terminal Weather System (ITWS)
  - Corridor Integrated Weather System (CIWS)
CCFP Collaborators

CCFP is developed by a collaborative team of weather professionals that include:

- NWS meteorologists at the Aviation Weather Center (AWC)
- NWS meteorologists at CWSUs
- MSC Meteorological Service of Canada
- Airline meteorology offices and independent weather units
CCFP Collaborative Process

- The chat sessions occur every two hours and are completed prior to the planning telcon (PT)
- AWC is committed to reading every comment
- The previous forecasts (4 and 6 hour forecasts) will be used as preliminary forecasts for the next 2 and 4 hour forecast
  - Except for the 1 a.m. forecast, which a new preliminary forecast will be issued for the 6-hr lead time.
CCFP Forecast Issuance Example

<table>
<thead>
<tr>
<th>Collaboration Session Open (Eastern Time)</th>
<th>CCFP Issue (Eastern Time)</th>
<th>Supported Telcon (Eastern Time)</th>
<th>Valid Times (Eastern Time)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0215 - 0245</td>
<td>0300</td>
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</tbody>
</table>

Note: The previous 4 and 6 hour forecasts will be used as preliminary forecasts for the 2 and 4 hour forecast.
CCFP Collaborative Process, cont.

- The final package is completed by AWC and includes the 2, 4 and 6 hour forecasts and posted on the TSD, as well as the AWC and ATCSCC websites.
New 2005 TSD CCFP Graphic (with detail)
Forecaster Confidence of Occurrence

Confidence (CONF)

- Confidence value is identified by color in one of 2 classes:
  - Low: 25 - 49% (GRAY)
  - High: 50 - 100% (BLUE)

- Confidence level is the subjective forecaster confidence in the occurrence of the minimum threshold criteria: at least 3,000 sq. mi area with coverage greater than 25%, and echo tops greater than 25,000 ft.
Coverage (CVRG):
Identify by degree of fill in one of 3 categories for areas:

- Low 25-49% (Sparse Fill)
- Med 50-74% (Medium Fill)
- High 75-100% (Solid Fill)
- Solid line of convection (Purple)
CCFP Coverage Criteria, cont.

Coverage areas:

- Low (Sparse Fill) Mostly SCT TSTMS predicted to cover 25-49% of the area. Possible line(s) of TSTMS.
- Med – (Medium Fill) Forecast to be 50-74% of the area and may include short lines or clusters. Often associated with weather fronts or tropical systems.
- High – (Solid Fill) Coverage is dense, 75% or > and usually includes lines and clusters.
- Lines – Nearly solid lines of convective activity.
Coverage Criteria Points to Remember

- An area, or single cell of convection with a coverage of less than 25% will not be forecast on the CCFP but may still impact the airspace, but is normally handled as a tactical issue
  - Remember the criteria for an area of convection on the CCFP is at least 3,000 sq. mi area with coverage greater than 25%, and echo tops greater than 25,000 ft.
Coverage Criteria Points to Remember

Coverage is NOT the chance of thunderstorm development, but the percentage of area covered by the convective activity
# CCFP Data Block

## DATA BLOCK

<table>
<thead>
<tr>
<th>TOPS</th>
<th>Height of Max Echo Tops expressed in feet MSL</th>
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<tbody>
<tr>
<td>GWTH</td>
<td>Growth rate of area or line</td>
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<tr>
<td>CONF</td>
<td>Forecaster confidence of Minimum Criteria</td>
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<td>CVRG</td>
<td>Area coverage</td>
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**Example Values:**
- TOPS: 370+
- GWTH: NC
- CONF: LOW
- CVRG: 75-100%
CCFP Movement

Note: MOVEMENT Indicated on graphic for each polygon and line as an arrow (showing direction) and a number (showing speed in kts)
CCFP Tops Criteria:

**TOPS:**

- Echo tops within the forecast area are reported in the following three categories:
  - 25,000-31,000 feet MSL
  - 31,000-37,000 feet MSL
  - Above 37,000

- Echo top of 25,000 feet Mean Sea Level (MSL), or greater, are expected to cover at least 25% of the forecast area

[TOPS: 370+ GWTH: NC CONF: LOW CVRG: 75-100%]

ATT-240, National Traffic Management Training Branch
CCFP Growth

GWTH (Avg. growth rate of area/tops):

- Growth of TSTM is three dimensional
- Growth rate changes over period of time
- Legend indicators:
  
  ++  Fast, Positive Growth
  +   Moderate Growth
  NC  No Change
  -   Negative Growth
      (Area/Tops Decreasing)

TOPS: 370+
GWTH: NC
CONF: LOW
CVRG: 75-100%
# 2005 CCFP Schedule

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Note: UTC is +5 hours ahead of Eastern before Daylight Savings (April 3, 2005), and +4 hours ahead of Eastern time during Daylight Savings
Scenario 1: Aug 10, 2004
**Scenario 1: Aug 10, 2004**
Scenario 2: September 15, 2004
Scenario 2: September 15, 2004
CONCLUSIONS

- CCFP intended as a long range (2-6 hour) strategic forecast not as a tactical tool
- The graphic was changed to give TMCs a more of a quick glance overview of the weather forecast
- Confidence is Color
  - Low (GRAY) 25-49%
  - High (BLUE) 50-100%
CONCLUSIONS

- Coverage is Fill
  - Low 25-49% (Sparse Fill)
  - Med 50-74% (Medium Fill)
  - High 75-100% (Solid Fill)

- CVRG is the percentage of area coverage
  NOT the chance of thunderstorm (TSTM)
  development