



CDM

Collaborative
Decision Making

TFM Convective Forecast (TCF)
FPAW October 12, 2017

Kevin Johnston-FAA
Kevin Stone-NWS

Overview

- Current Weather Evaluation Team (WET) Tasks
- Results of the Collaborated Aviation Weather Statement (CAWS) Demonstration
- Traffic Flow Management (T) Convective Forecast (TCF) Details
- TCF Performance Metrics



CDM

Collaborative
Decision Making

WET Tasks

- 71: Moving forward with CAWS/CCFP
Improvements to a single, scheduled product
hosted on the Traffic Situational Display
(closed)
- 72: Extended Convective Forecasts to 30 hours



CDM

Collaborative
Decision Making

CAWS Results

- FAA User Suitability Assessment was conducted during 2016
- Results: *CAWS was not effectively robust in supporting strategic planning and TFM decision making during convective weather*
- Key issues:
 - *Necessity to view & mentally integrate two separate convective forecast products – CAWS and CCFP*
 - *CAWS and auto-CCFP often spanned multiple time periods and were displayed on different geographic scales -- Difficulty interpreting deltas / differences between CAWS and CCFP*
 - *CAWS not integrated on the Traffic Situational Display (TSD)*
 - *Weather and its impact was discussed with onsite meteorologists well in advance of CAWS issuances*
 - *Little improvement of active collaboration from industry*



CDM

Collaborative
Decision Making

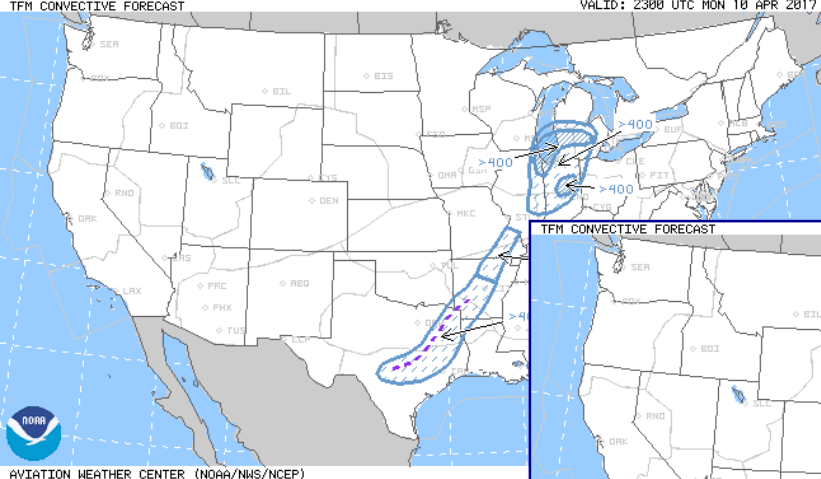
TCF Details

- TCF issued 24 x 7, every 2 hours with forecast projections: 4, 6, 8 hours
- Collaborated between NWS and Industry meteorologists: March-October
- TCF issued 45 minutes prior to every Strategic Planning Webinar
- Forecasts available on TSD and Web (www.AviationWeather.gov/tcf)
- *High Confidence only categories:*
 - Sparse and Medium coverage, Broken Line, Solid Line
- One convective product for TFM—name change to overcome negative image of CCFP and CAWS while promoting single product for TFM collaborated decisions

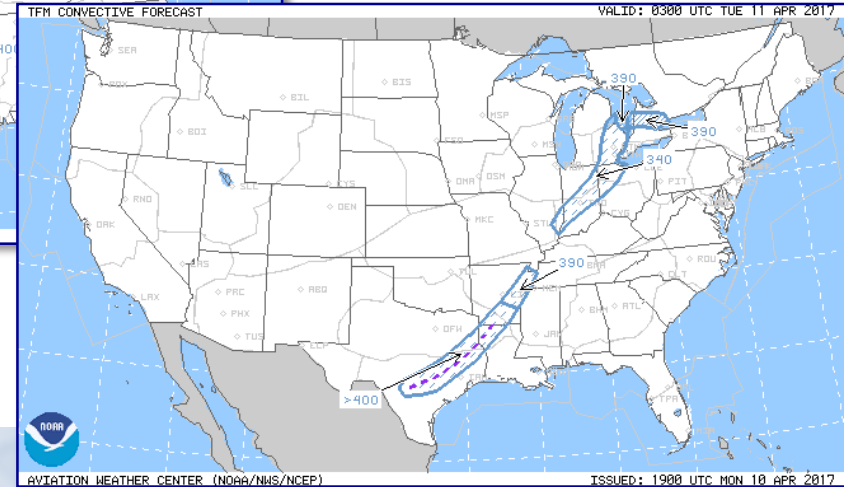
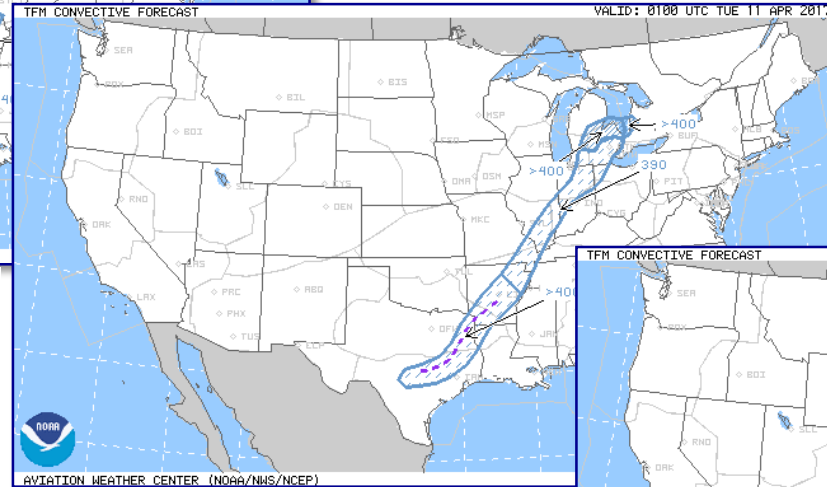


CDM

Collaborative
Decision Making



TCF Examples



COVERAGE

HEIGHT

TOPS: 100's OF FEET MSL

SPARSE	
25-39%	
MEDIUM	
40-74%	

25000 - 29000	290
30000 - 34000	340
35000 - 39000	390
40000+	>400

LINES

BROKEN 40-74%

SOLID 75-100%

TCF categories similar to CCFP for coverage, confidence, and tops



CDM

Collaborative
Decision Making

CDM/WET Task 72

- Convective outlooks to 30 hours
- Automated product based on array/blend of best NWS computer models
- Similar look and feel to TCF
 - Exception: No lines
 - Web site: <http://testbed.aviationweather.gov/tcf/extended>
- Updated every 2 hours
- Will support next day planning and the Plan/Execute/Review/Train/Improve (PERTI) Initiative



CDM

Collaborative
Decision Making

2017 Thoughts

- TCF well received
- Meteorologist collaboration working better
- Operational reviews indicating TCF convection accurate greater than 90% of the time
- Questions regarding interpretation of Broken Lines has led to some changes for 2018
 - Line structure with coverage same as medium coverage polygon; 40-74%
 - Will only retain solid line coverages



CDM

Collaborative
Decision Making

2017 Performance Metrics



CDM

Collaborative
Decision Making

Summary

- TCF is the operational collaborated aviation convective forecast product
- **Primary convective guidance for TFM Planners to use when collaborating on Traffic Management Initiatives**
- Posted on TSD and Web (www.AviationWeather.gov/tcf) every 2 hours, 24x7
- Issued 45 minutes prior to every Strategic Planning Webinar
- Collaborated process March through October: NWS & Industry Mets
- TCF issued by NWS Aviation Weather Center



CDM

Collaborative
Decision Making

Contact Info

- Kevin Johnston, FAA: Kevin.L.Johnston@faa.gov 540-422-5510
- Kevin Stone, NWS: Kevin.Stone@noaa.gov 301-427-9363
- Jeff McLaren, AAL: Jeff.Mclaren@aa.com 817-312-7643



CDM

Collaborative
Decision Making