

Weather Evaluation Team



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Decision Making

Jason Baker, FAA

Richard Egert, United Airlines

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Weather Team Objective

Weather Evaluation Team

Objective:

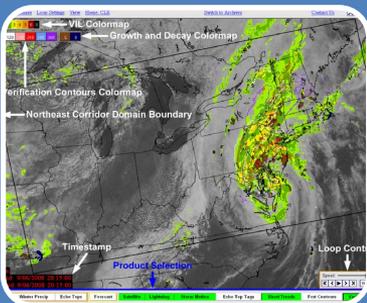
The overall role of the Weather Evaluation sub-team (WET) is to serve as the primary point-of-contact for feedback and recommendations on weather products.

Team responsibilities include:

- **Act as the Subject Matter Experts for weather integration into CDM tools**
- **Provide external outreach to weather products developers and researchers**
- **Provide internal coordination with CDM sub-teams on weather related issues**

Ultimately, the WET's goals are to provide comprehensive weather products that allow for *improved predictability* and *better decision-making* during weather events.

Current and Future Taskings



Task 125 – Consolidated Storm Prediction for Aviation (CoSPA) Performance Metrics

- *Work with the Weather Community of Interest to review metrics development*



Task – In development

- *Turbulence focused task analyzing current and soon to be reporting methods and who these reports will reach within the private sector and government*



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WET Team Roster

WET Co-Leads

Jason	Baker	FAA ANG-WX	FAA-ANG-C6
Richard	Egert	United	Industry SME

FAA Members

Eric	Avila	ZHU	FAA / NATCA
Amy	Galvan	FAA / ATCSCC / BUE	ATCSCC
Michelle	Whitcher	FAA	FAA-AJV

Industry Members

Barbara	Becker	Southwest	Industry SME
Kory	Gempler	FedEx	Industry SME
Christine	Gregg	JetBlue	Industry SME
Neal	Husa	Alaska	Industry SME
Mark	Johnson	Southwest	Industry SME
Stephanie	Klipfel	Delta	Industry SME
Timothy	Matuszewski	Spirit	Industry SME
Jeff	McLaren	American	Industry SME
Erik	Proseus	FedEx	Industry SME
Jeff	Sarver	UPS	Industry SME
Eric	Wildgrube	Delta	Industry SME

NWS / NavCanada Members

Eric	Dupuis	NavCanada	
Gilles	Ratté	Met Services Canada	
Kevin	Stone	NWS / HQ	
Jennifer	Stroozas	NWS / AWC	



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WET Subject Matter Experts

Scott	Birch	NWS /Western Region
Debra	Blondin	NWS / AWC
Chris	Brinton	Mosaic
Jenny	Colavito	FAA-ANG-C6
Jon	Cunningham	Mosaic
Christopher	DiPrima	SFO
Ken	Fenton	NOAA / GSL
Matt	Fronzak	MITRE
John	Huhn	MITRE
Curt	Kaler	Mosaic
Jonathan	Leffler	NWS / AWC
Nathan	Polderman	United
Nupur	Sinha	SFO
Brandon	Smith	FAA-ANG-C6
Ken	Venzke	NWS / CWSU
Matt	Wandishin	NOAA / GSL
Sonia	Alvidrez	FAA-ANG-C6
Honorable Mention		
Samantha	Carlson	FAA-ANG-C6

2023-24 Achievements

- Closed out the following tasks:
 - Task 101: SFO Marine Stratus Forecast System and GDP Parameter Selection Model (GPSM)
 - Task 117: TCF Capability Assessment
 - Task 120: novel Ensemble Weather Forecasts and Applications for TFM
- Task 101: Re-instituted yearly comparison review of forecasted clearing times issued during the SFO status season
- Task 101: Supported FAA ANG-C64 in completing cost/benefit analysis
- Task 117: Completion of survey developed by the WET Team to study TFM Convective Forecast (TCF) user understanding
 - Conducted a two day “train the trainer” course based on survey results (11/14/23 and 11/16/23)

Task 101 SFO MSFS & GPSM

WET Team Task 101 Completion Status:

- ✓ Provide monthly status updates to the CSG.
- ✓ Engage with the appropriate FAA and/or NWS office to support the SFO MSFS
- ✓ Provide information to the CDM Training Team
- ✓ Provide support for evaluation of SFO GPSM



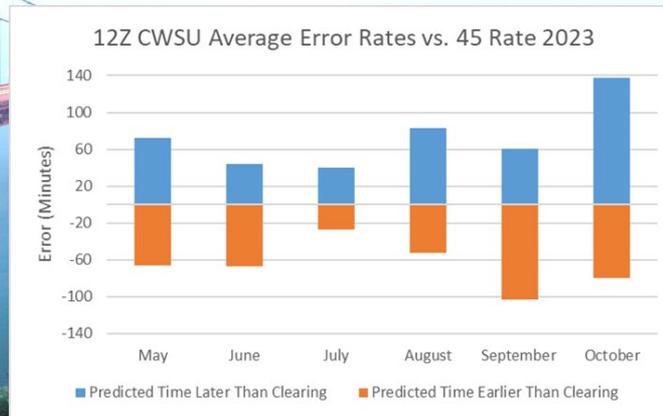
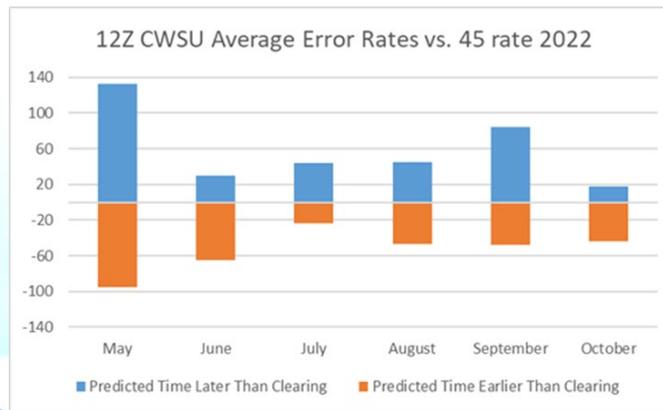
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Task 101 SFO MSFS & GPSM

Reviewed 2022 and 2023 NWS human-generated stratus clearing forecasts to compare with prior conducted studies.

- Comparison of the human-generated CWSU forecast to the time the actual 45-rate returned



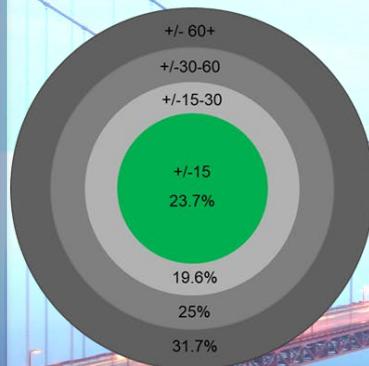


Task 101 SFO MSFS & GPSM

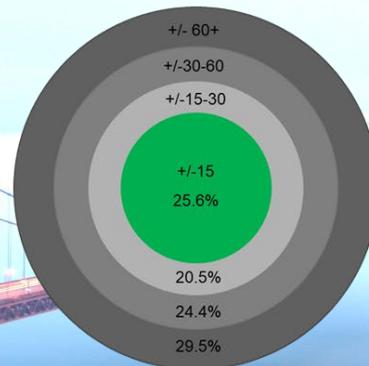
Reviewed 2022 and 2023 NWS human-generated stratus clearing forecasts to compare with prior conducted studies.

- Comparison to AvMet 2012-2019 study when MSFS was available

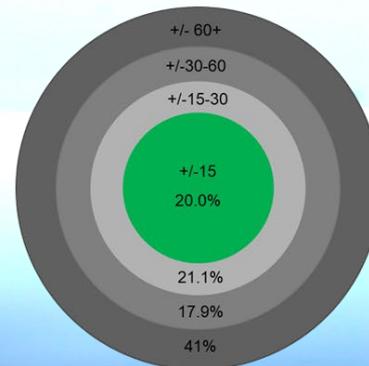
2012-2019



2022



2023



Task 101 SFO MSFS & GPSM

- GPSM redevelopment in 2023 relied on acquiring Aggregate Demand List (ADL) and stratus forecast data.
- SFO gained access to ADL data upon becoming a CDM member.
- Stratus forecast data acquisition has been difficult.
- Lack of probabilistic stratus clearing forecast hampers testing.
- Forecast format and GPSM aren't compatible; working to resolve.



Task 101 SFO MSFS & GPSM

NWS SFO Marine Stratus website <https://www.weather.gov/zoa/stratus> has been operational since May 2022. Website provides:

- CWSU Human Generated Clearing Forecast
- Radar / Satellite Imagery
- Meteorological Data
- Camera Views

Training package developed and available via TFM Learning website.

Task 117 TCF Capability Assessment

WET Team Task 117 Completion Status:

- ✓ Conduct an assessment of the existing TCF capabilities and provide recommendations for additional functionality necessary to enhance user effectiveness.
- ✓ Conduct monthly review of TCF performance metrics, which include reviews of events throughout the convective season to monitor TCF performance.
- ✓ Maintain a continuous assessment of TCF user understanding to determine effectiveness of training.

Task 117 TCF Capability Assessment

Revised TCF Training package has been developed to include information on TCF production.

Two train-the-trainer sessions held on 11/14/2023 and 11/16/2023 were created based on a prior assessment conducted by the WET under Task 106.



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Task 120 novel Ensemble Weather Forecasts and Applications for TFM (nEWT)

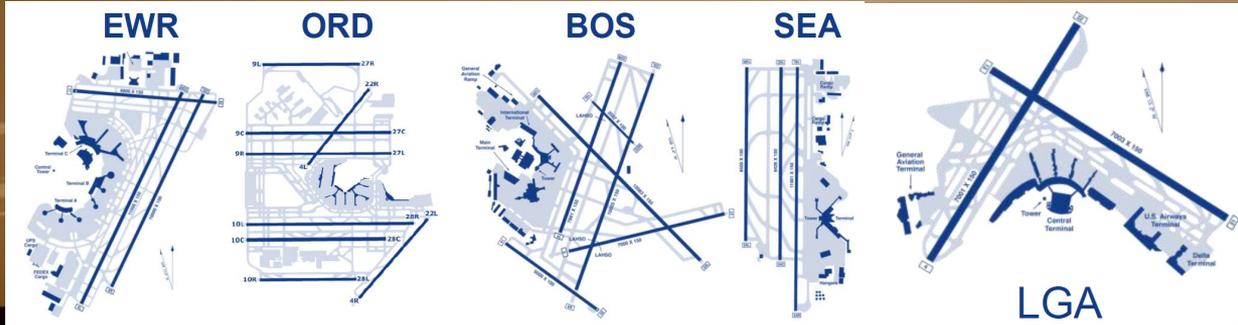
WET Team Task 120 Completion Status:

- ✓ Coordinate with the CDM Manager for engaging designated subject matter experts to participate in the objective.
- ✓ Document initial findings that will include recommendations to further evolve the weather forecasting abilities associated with the decision making process in Traffic Flow Management.



Task 120 nEWT

Disclaimer: Prototype of nEWT was only for the following airports and is currently unfunded.



Current Efforts:

- Lots of interest in Convective Weather Metrics; confirmed through recent FAA Assessment.
- FAA Weather Community of Interest, CDM sub-teams (SET and WET) and other FAA offices have begun collaboration to define needs.
- Focus of metrics seems are in the 2-8 forecast window; with some interest going out to 36 hours.

Turbulence Task Overview

Technological strides developed by third-party vendors have enhanced turbulence awareness. The price of the technology and concerns over proprietary information sharing have created safety risks.

National Transportation Safety Board (NTSB) published a research report in 2021 identifying the following risks:

1. Insufficient submission and dissemination of turbulence observations
2. Lack of shared awareness risks

Summary

- Since last annual meeting:
 - Active; closed out 3 tasks (SFO MSFS, TCF and nEWT).
- Current tasking:
 - WET is collaborating with SET and FAA organizations to determine CoSpa Performance Metrics needs.
- Potential Future Work:
 - New task is being developed by the WET to focus on turbulence reports and will be requesting CDM Leadership approval soon.



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