Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE CENTRAL REGION SUPPLEMENT 05-2005 APPLICABLE TO NWSI 10-1601 AUGUST 7, 2007

Operations and Services Performance, NWSPD 10-16 Verification Procedures, NWSI 10-1601 CENTRAL REGION TAF VERIFICATION DISPLAY REQUIREMENTS

NOTICE: This publication is available at: <u>http://www.nws.noaa.gov/directives/</u>.

OPR: W/CR1x11 (G. Schmeling)**Certified** by: W/CR1 (J. Michael Looney)**Type of Issuance:** Routine

SUMMARY OF REVISIONS: This supplement supercedes Central Region Supplement 05-2005, applicable to NWSI 10-1601, dated May 2, 2005. This updated (revised) supplement adds the requirement, and instructions, to post the monthly TAF Verification graphs on the Central Region "Metdat" Drive.

/signed/

July 25, 2007

Lynn P. Maximuk Director, Central Region Date

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1. <u>Policy</u>. Central Region (CR) Weather Forecast Offices (WFO) will maintain and update, on a monthly basis, TAF verification graphs as detailed in this Supplement. Each WFO will also post, on a monthly basis, updated graphs on the CR "Metdat" Drive.

2. <u>Purpose</u>. The objectives of monthly computations and display of TAF verification graphs are 1) to establish a regionally-standardized TAF verification product 2) to check how the WFO is performing compared to the WFO's past performance and 3) to determine if there are any biases in office performance of TAF accuracy.

3. <u>Description of Central Region TAF Verification Display Graphs</u>. The bar graphs shall be in Microsoft Excel format only. A template for the bar graphs, and instructions to generate the bar graphs, are available via the CR intranet on the CR Metdat Drive at the directory titled "TAF_BARGRAPH".

Each of the four bar graphs will display the average stats of all TAFs sites for which a WFO is responsible.

The term "IFR" as used in this Supplement is defined as ceiling below 1,000 ft and/or visibility below 3 statute miles, which includes VLIFR and LIFR conditions. Stats on Demand refers to this range as "VLIFR, LIFR, IFR".

3.1 The POD for IFR - A bar graph that displays, on a monthly basis, the last 12 months Probability of Detection (POD) of ceiling below 1,000 feet and/or visibility below 3 statute miles (combined IFR, LIFR and VLIFR) for all scheduled TAFs in the zero to 6-hour valid time period. This bar graph should be compared to the conterminous POD of the Model Output Statistics (MOS) of the Global Forecast System (GFS). See example 1.

3.2 The FAR for IFR - A bar graph that displays, on a monthly basis, the last 12 months False Alarm Ratio (FAR) of ceiling below 1,000 feet and/or visibility below 3 statute miles (combined IFR, LIFR and VLIFR) for all scheduled TAFs in the zero to 6-hour valid time period. This bar graph should be compared to the conterminous FAR of the Model Output Statistics (MOS) of the Global Forecast System (GFS). See example 2.

3.3 The POD for MVFR - A bar graph that displays, on a monthly basis, the last 12 months Probability of Detection (POD) of ceiling between 1,000 feet and 3,000 feet and/or visibility between 3 and 5 statute miles (Marginal Visual Flight Rules (MVFR) category) for all scheduled TAFs in the zero to 6-hour valid time period. This bar graph should be compared to the conterminous POD of the Model Output Statistics (MOS) of the Global Forecast System (GFS). See example 3.

3.4 The FAR for MVFR - A bar graph that displays, on a monthly basis, the last 12 months False Alarm Ratio (FAR) of ceiling between 1,000 feet and 3,000 feet and/or visibility between 3 and 5 statute miles (Marginal Visual Flight Rules (MVFR) category) for all scheduled TAFs in the zero to 6-hour valid time period. This bar graph should be compared to the conterminous FAR of the Model Output Statistics (MOS) of the Global Forecast System (GFS). See example 4.

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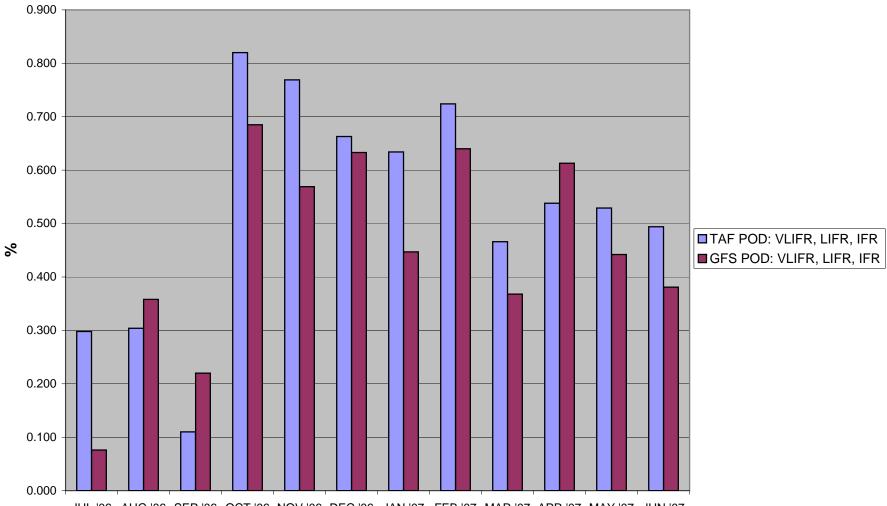
4. <u>Accessing Data via Stats on Demand</u>. The information/data used to produce the TAF Verification graphs as described in section 3 can be accessed via the Stats on Demand Page. Once the Stats on Demand Page is accessed, the instructions to obtain the bar graph data can be used. These instructions are posted on the CR Metdat Drive in the directory "TAF_BARGRAPH".

5. <u>Posting Monthly Updates of TAF Verification Graphs on the CR Metdat Drive</u>. By the 15th of each month, each CR WFO shall post their updated TAF verification bar graphs (as described in Section 3 of this Supplement) on the CR Metdat Drive in the directory "TAF_BARGRAPH". Each WFO shall post the bar graph (based on the template as provided in Section 2) using its 3--letter site ID as the prefix.

6. <u>Local TAF Verification Requirements and Enhancements</u>. Each WFO is encouraged to establish additional verification stats based on its own unique users, terrain, staff, airports, etc. Also, each WFO is encouraged to plot other stats, or pertinent information, on the bar graphs that may help to analyze TAF performance. For instance, in addition to the required bars for POD and FAR, an office may choose to add a bar for the percentage of observations that are below 1,000 feet or 3 miles.

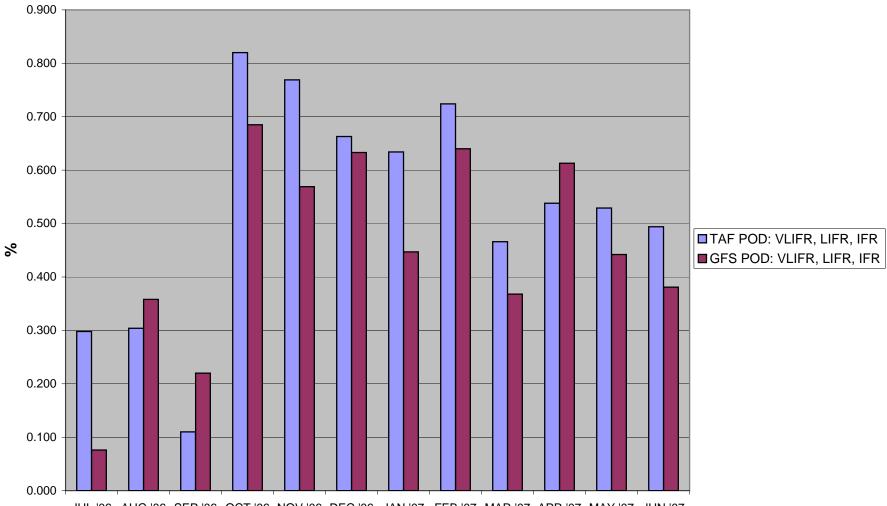
WFO Wichita Aviation Verification Graphs - TAF VS GFS MOS

		JUL '06	AUG '06	SEP '06	OCT '06	NOV '06	DEC '06	JAN '07	FEB '07	MAR '07	APR '07	MAY '07	JUN '07
(TAF POD for VLIFR, LIFR, IFR	0.298	0.304	0.110	0.820	0.769	0.663	0.634	0.724	0.466	0.538	0.529	0.494
	GFS POD for VLIFR, LIFR, IFR	0.076	0.358	0.220	0.685	0.569	0.633	0.447	0.640	0.368	0.613	0.442	0.381
	TAF FAR for VLIFR, LIFR, IFR	0.586	0.579	0.879	0.208	0.180	0.439	0.349	0.265	0.357	0.309	0.423	0.485
	GFS FAR for VLIFR, LIFR, IFR	0.884	0.652	0.796	0.294	0.364	0.535	0.528	0.298	0.595	0.518	0.525	0.545
	TAF POD for MVFR	0.487	0.547	0.641	0.683	0.657	0.594	0.733	0.676	0.593	0.592	0.538	0.530
	GFS POD for MVFR	0.219	0.324	0.558	0.476	0.472	0.414	0.590	0.467	0.491	0.355	0.451	0.370
	TAF FAR for MVFR	0.838	0.705	0.552	0.363	0.447	0.455	0.409	0.419	0.544	0.622	0.615	0.640
	GFS FAR for MVFR	0.789	0.675	0.515	0.448	0.555	0.426	0.503	0.528	0.601	0.649	0.692	0.679



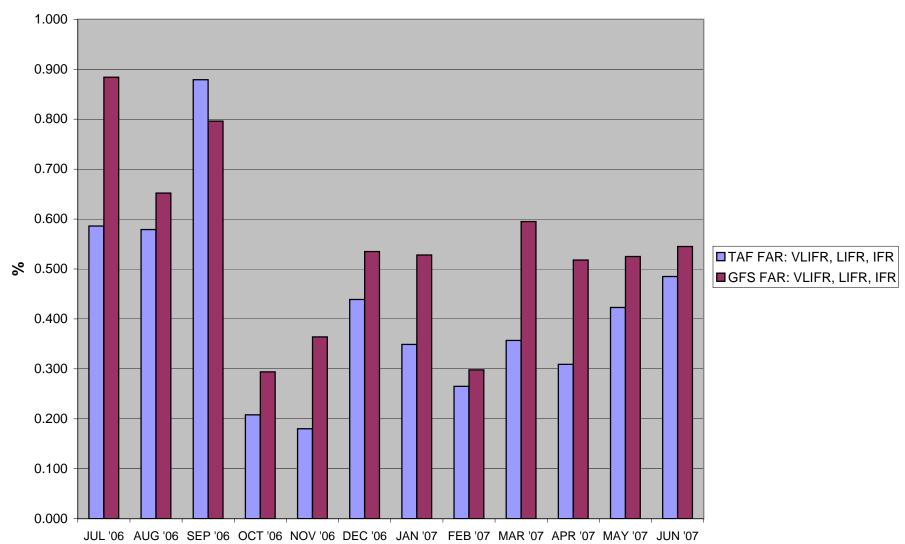
WFO Wichita POD VLIFR, LIFR, IFR - TAF VS GFS MOS

JUL '06 AUG '06 SEP '06 OCT '06 NOV '06 DEC '06 JAN '07 FEB '07 MAR '07 APR '07 MAY '07 JUN '07

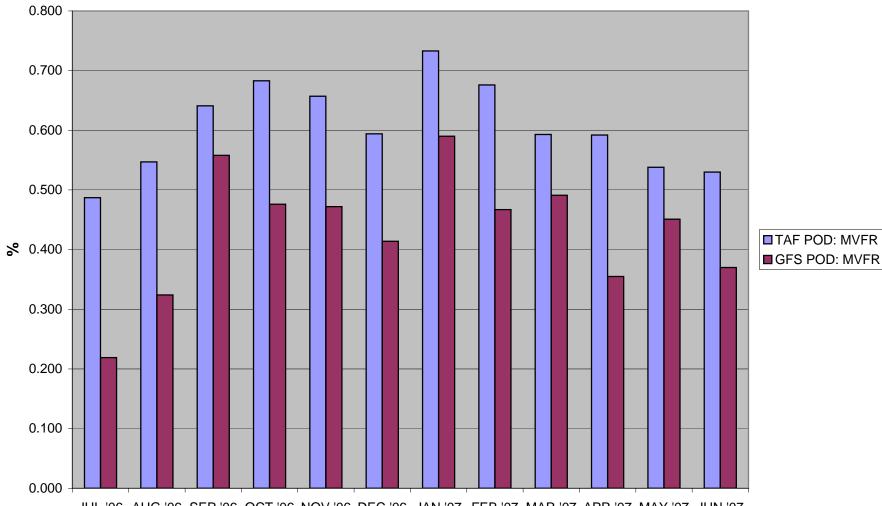


WFO Wichita POD VLIFR, LIFR, IFR - TAF VS GFS MOS

JUL '06 AUG '06 SEP '06 OCT '06 NOV '06 DEC '06 JAN '07 FEB '07 MAR '07 APR '07 MAY '07 JUN '07

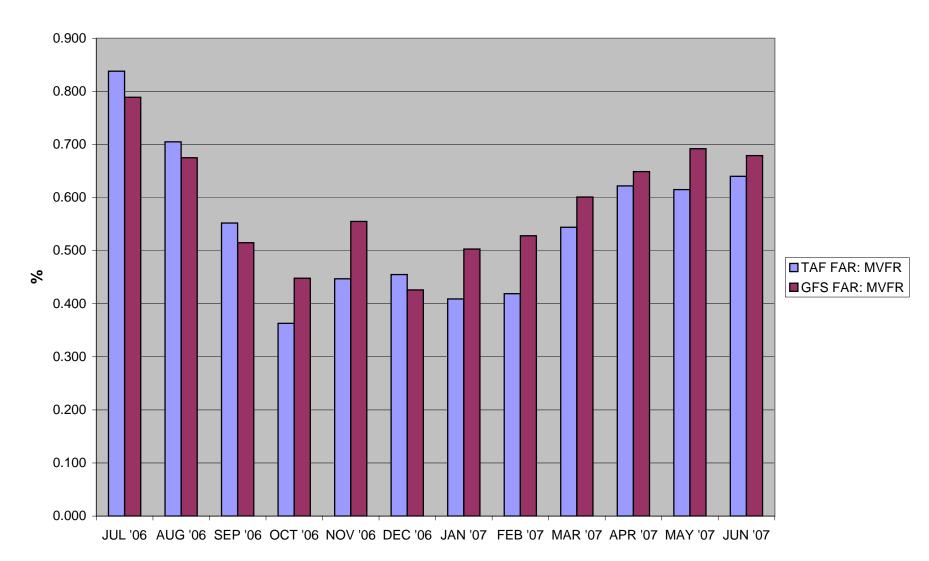


WFO Wichita FAR VLIFR, LIFR, IFR - TAF VS GFS MOS



WFO Wichita POD MVFR - TAF VS GFS MOS

JUL '06 AUG '06 SEP '06 OCT '06 NOV '06 DEC '06 JAN '07 FEB '07 MAR '07 APR '07 MAY '07 JUN '07



WFO Wichita FAR MVFR - TAF VS GFS MOS