Photo credit: bbc.com

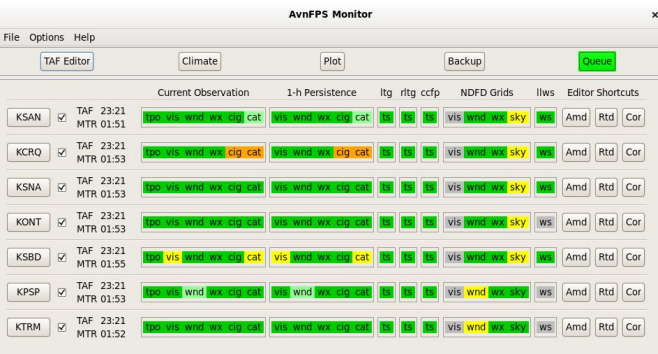# Using TAF Verification to Improve Forecasts and Decision Support Services

Brandt Maxwell

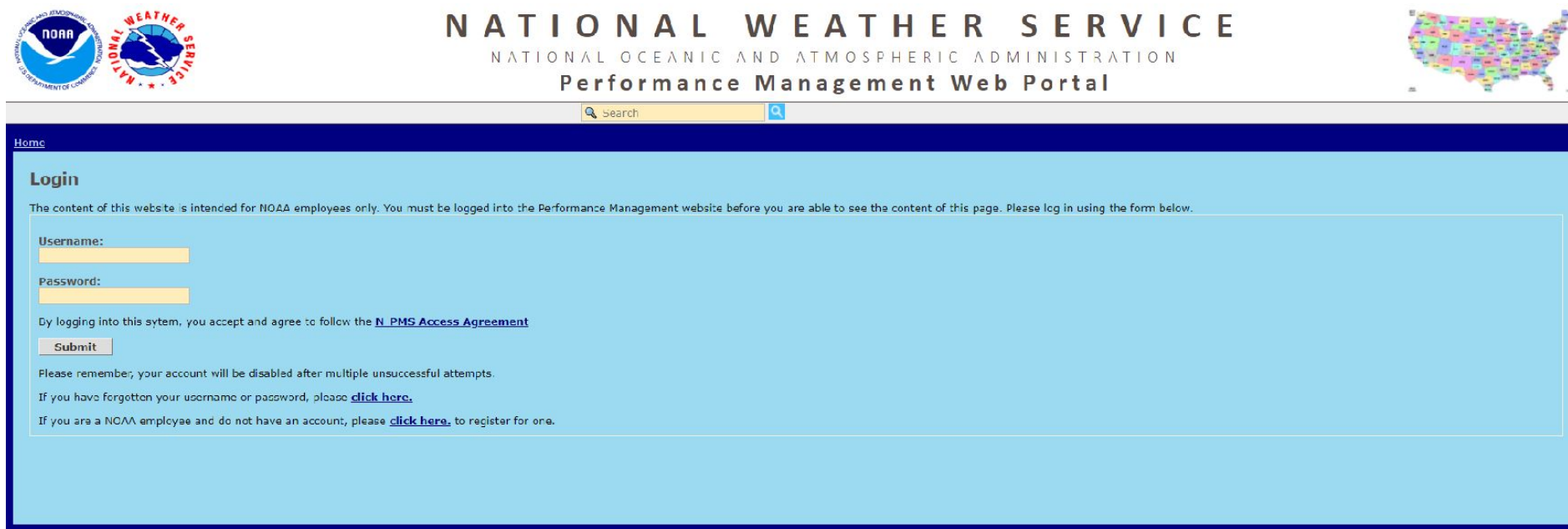Meteorologist

NOAA/NWS San Diego

Brandt.Maxwell@noaa.gov

AvnFPS Monitor

File   Options   Help

| TAF Editor | Climate | Plot | Backup | Queue |

| | Current Observation | 1-h Persistence | ltg | rltg | ccfp | NDFD Grids | llws | Editor Shortcuts |

KSAN	TAF 23:21 MTR 01:51	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KCRQ	TAF 23:21 MTR 01:53	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KSNA	TAF 23:21 MTR 01:53	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KONT	TAF 23:21 MTR 01:53	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KSBD	TAF 23:21 MTR 01:55	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KPSP	TAF 23:21 MTR 01:53	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor
KTRM	TAF 23:21 MTR 01:52	tpo vis wnd wx cig cat	vis wnd wx cig cat	ts	ts	ts	vis wnd wx sky	ws	Amd Rtd Cor

OBS\FORECASTS	1	2	3	4	5	6	TOTAL
<200 (1)	0	0	0	0	0	0	0
200-400 (2)	0	0	27	0	0	17	44
500-900 (3)	0	0	3	49	0	50	102
1000-1900 (4)	0	0	95	227	96	206	624
2000-3000 (5)	0	0	25	214	205	124	568
>3000 (6)	0	0	48	205	408	4,079	4,740
TOTAL	0	0	198	695	709	4,476	6,078
BIAS	0.000	0.000	1.941	1.114	1.248	0.944	----

TAF Verification – Available for all NOAA Personnel

- https://verification.nws.noaa.gov/content/pm/verif/aviation/index.aspx
- A part of the greater Performance Management website
- Available from 2005-present
- Need username and password (not the same as Google mail; you must register)

Numerous Options – "Aviation Weather" is the Best One!
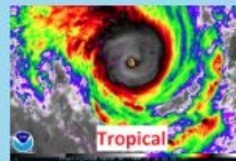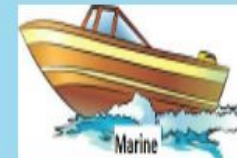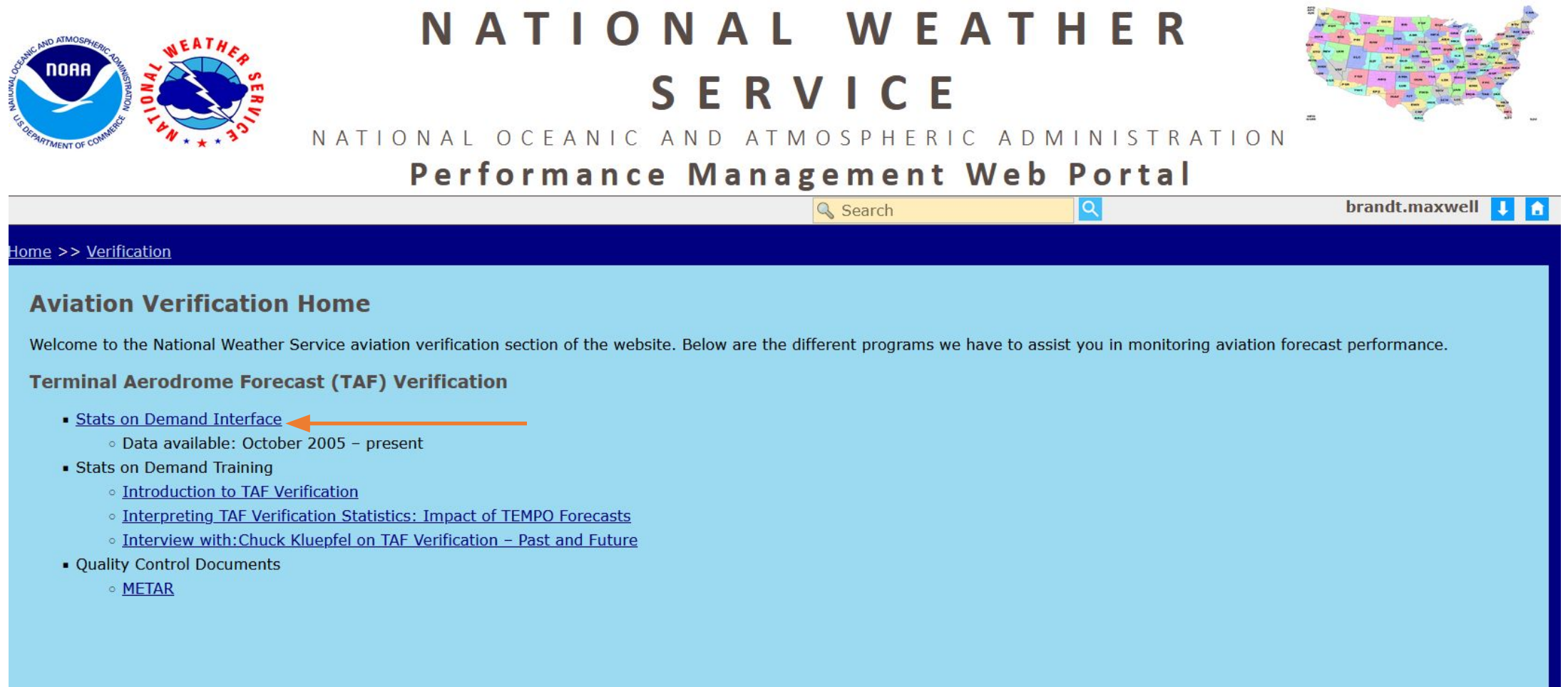
Then Select "Stats on Demand Interface"

- After this, the fun begins…I promise!.

TAF Stats Request

- The menu

TAF Stats Request

Click here to download customized report data in CSV format for Flight Category and Sig Wx element types.
Data is available from 09/01/2005 to 06/07/2022. Prior to 12/01/2020 only monthly-sorted **archive data** data is available.

| From Date | 01/01/2022 |
| To End Date | 06/01/2022 |

Months to report ✔ JAN ✔ FEB ✔ MAR ✔ APR ✔ MAY ✔ JUN

✔ JUL ✔ AUG ✔ SEP ✔ OCT ✔ NOV ✔ DEC ✔ Select All

National **Region** **WFO** **State** **Terminal** **Experimental Forecast** **My Verification**

Selection area set to Terminal.

Filter [?]   Area Type   Location

WFO » SGX

Select [?]   Terminal   Current Selections

KCRQ
KONT
KPSP
KSAN
KSBD
KSNA

KSAN

Add   Remove   Clear

Element Type	FLIGHT CATEGORY
Forecast Type	OPERATIONAL IMPACT
Guidance Type	GFS LAMP
Ceilings Below	NONE
Visibilities Below	NONE

TAF Type ○ Scheduled ○ Amended ○ Scheduled and amended combined

TAF Begin Times ✔ 0000-0559 ✔ 0600-1159 ✔ 1200-1759 ✔ 1800-2359 ✔ Select All

Forecast Projections ✔ >0 - 3 ✔ >3 - 6 ✔ >6 - 9 ✔ >9 - 12 ✔ >12 - 18 ✔ >18 - 24 ☐ >24 - 30 ☐ Select All

Email Option [?] ☐ Email me when the report is finished

Get Scores Reports may take several minutes to create. Please limit criteria to avoid long waits.

TAF Stats Request

Element Type	CEILING ∨
Forecast Type	**CEILING**
Guidance Type	VISIBILITY
Ceilings Below	FLIGHT CATEGORY
	WIND SPEED
TAF Type	WIND DIRECTION
	WIND GUSTS
TAF Begin Times	SIGNIFICANT WEATHER TYPE

Forecast Type	OPERATIONAL IMPACT ∨
Guidance Type	**OPERATIONAL IMPACT**
	PREVAILING
Ceilings Below	TEMPO
TAF Type	PROB

Guidance Type	GFS LAMP ∨
Ceilings Below	NONE
	GFS MOS
TAF Type	NAM MOS
	NGM MOS
TAF Begin Times	**GFS LAMP**
Forecast Projections	PERSISTENCE

Coming soon by popular demand! NBM MOS

TAF Report Page

- Intro…

	TAF Report Page
Element	Flight Category
TAF Type	Operational Impact (Scheduled Only)
Guidance Type	GFS LAMP
Date Range	01/01/2022 TO 06/01/2022
Terminal	KSAN
Cycle Times	0000Z, 0600Z, 1200Z, 1800Z
Projections	>0 - 3, >3 - 6, >6 - 9, >9 - 12, >12 - 18, >18 - 24
Report Format	Hours | Minutes | Percent | Frequency | Toggle Legend

Tip: Click on "Percent" and get more meaningful numbers in the output

More of the TAF Report Page

- Contingency Tables (The Matrices)
- Obs are always on left axis/legend; Forecasts are always on top axis/legend:

Hit	1-Category Error	2-Category Error	3-Category Error	4 or More Category Error

Show All ⌄ Hide All

⌃ MULTICATEGORY CONTINGENCY TABLES WITH ASSOCIATED SCORES

TAF

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0	82	55	10	35	182
LIFR	0	191	313	42	301	847
IFR	0	106	1,492	563	441	2,602
MVFR	0	31	2,222	26,529	7,217	35,999
VFR	0	154	1,753	15,223	100,428	117,558
TOTAL	0	564	5,835	42,367	108,422	157,188
BIAS	0.000	0.666	2.243	1.177	0.922	----

GFS LAMP

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	15	48	31	16	72	182
LIFR	46	148	111	179	363	847
IFR	25	585	446	838	708	2,602
MVFR	70	1,490	1,996	25,921	6,522	35,999
VFR	108	369	608	14,204	102,269	117,558
TOTAL	264	2,640	3,192	41,158	109,934	157,188
BIAS	1.451	3.117	1.227	1.143	0.935	----

Quick Rewind: Instead of "Frequency" use "Percent"

- Smaller numbers/easier to comprehend
  - Good to check for over-forecast vs under-forecast "biases"
    - But official biases are listed too
  - And those "bad forecasts" in red…

Hit	1-Category Error	2-Category Error	3-Category Error	4 or More Category Error

⌄ Show All ⌃ Hide All

⌃ MULTICATEGORY CONTINGENCY TABLES WITH ASSOCIATED SCORES

TAF

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0.00	0.05	0.03	0.01	0.02	0.12
LIFR	0.00	0.12	0.20	0.03	0.19	0.54
IFR	0.00	0.07	0.95	0.36	0.28	1.66
MVFR	0.00	0.02	1.41	16.88	4.59	22.90
VFR	0.00	0.10	1.12	9.68	63.89	74.79
TOTAL	0.00	0.36	3.71	26.95	68.98	100.00
BIAS	0.000	0.666	2.243	1.177	0.922	----

GFS LAMP

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0.01	0.03	0.02	0.01	0.05	0.12
LIFR	0.03	0.09	0.07	0.11	0.23	0.54
IFR	0.02	0.37	0.28	0.53	0.45	1.66
MVFR	0.04	0.95	1.27	16.49	4.15	22.90
VFR	0.07	0.23	0.39	9.04	65.06	74.79
TOTAL	0.17	1.68	2.03	26.18	69.94	100.00
BIAS	1.451	3.117	1.227	1.143	0.935	----

Replay: Instead of "Frequency" use "Hours"

- Very meaningful data for more anomalous occurrences
- Some numbers can get quite big

Hit	1-Category Error	2-Category Error	3-Category Error	4 or More Category Error

⊻ Show All ⊼ Hide All

⊼ MULTICATEGORY CONTINGENCY TABLES WITH ASSOCIATED SCORES

TAF

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0.00	6.83	4.58	0.83	2.92	15.17
LIFR	0.00	15.92	26.08	3.50	25.08	70.58
IFR	0.00	8.83	124.33	46.92	36.75	216.83
MVFR	0.00	2.58	185.17	2,210.75	601.42	2,999.92
VFR	0.00	12.83	146.08	1,268.58	8,369.00	9,796.50
TOTAL	0.00	47.00	486.25	3,530.58	9,035.17	13,099.00
BIAS	0.000	0.666	2.243	1.177	0.922	----

GFS LAMP

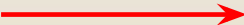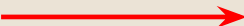| OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	1.25	4.00	2.58	1.33	6.00	15.17
LIFR	3.83	12.33	9.25	14.92	30.25	70.58
IFR	2.08	48.75	37.17	69.83	59.00	216.83
MVFR	5.83	124.17	166.33	2,160.08	543.50	2,999.92
VFR	9.00	30.75	50.67	1,183.67	8,522.42	9,796.50
TOTAL	22.00	220.00	266.00	3,429.83	9,161.17	13,099.00
BIAS	1.451	3.117	1.227	1.143	0.935	----

More of the TAF Report Page

- Contingency Tables Scores (Statistics)
- Most of These Are Self-Explanatory

CONTINGENCY TABLES SCORES (TAF / GFS LAMP)	
Percent Hits [?]	81.84 / 81.94
Percent >1 Category Errors [?]	1.80 / 2.57
Peirce Skill Score (PSS) [?]	0.619 / 0.608
5-category Gerrity Skill Score (GSS)) [?]	0.376 / 0.340
5-category GSS delta [?]	0.002 / 0.002
3-category GSS [?]	0.621 / 0.524
3-category GSS delta [?]	0.000 / 0.000
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	7.80
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	7.42
TAF = GFS LAMP = OBS [?]	75.07
TAF = GFS LAMP <> OBS [?]	9.71

Peirce Skill Score & Garrity Skill Score

- Peirce Skill Score: -1 to 1, with 0 being random based on climatology and 1 being perfect

- Garrity Skill Score: Also -1 to 1, with 0 indicating no skill and 1 being perfect…but…with greater bonus towards forecasting anomalies well

CONTINGENCY TABLES SCORES (TAF / GFS LAMP)	
Percent Hits [?]	81.84 / 81.94
Percent >1 Category Errors [?]	1.80 / 2.57
Peirce Skill Score (PSS) [?]	0.619 / 0.608
5-category Gerrity Skill Score (GSS)) [?]	0.376 / 0.340
5-category GSS delta [?]	0.002 / 0.002
3-category GSS [?]	0.621 / 0.524
3-category GSS delta [?]	0.000 / 0.000
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	7.80
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	7.42
TAF = GFS LAMP = OBS [?]	75.07
TAF = GFS LAMP <> OBS [?]	9.71

Still More on the TAF Report Page

- Finally the last part
- POD/FAR/CSI for each category (slice) plus combinations ("& below")

POD-FAR-CSI SCORES (TAF / GFS LAMP)

Category/Scores	Probability of Detection (POD) [?]	False Alarm Ratio (FAR) [?]	Critical Success Index (CSI) [?]	% Improvement TAF CSI over GFS LAMP
VLIFR	0.000 / 0.082	--- / 0.943	0.000 / 0.035	-100.00
LIFR & Below	0.265 / 0.250	0.516 / 0.912	0.207 / 0.070	195.82
IFR & Below	0.617 / 0.401	0.650 / 0.761	0.287 / 0.176	63.38
MVFR & Below	0.798 / 0.807	0.351 / 0.324	0.557 / 0.582	-4.24
LIFR Slice	0.226 / 0.175	0.661 / 0.944	0.157 / 0.044	253.21
IFR Slice	0.573 / 0.171	0.744 / 0.860	0.215 / 0.083	157.60
MVFR Slice	0.737 / 0.720	0.374 / 0.370	0.512 / 0.506	1.16
VFR	0.854 / 0.870	0.074 / 0.070	0.800 / 0.817	-2.06

Profile Of Data Used For This Report

Scheduled Forecasts Analyzed [?]	553
Total 5-Minute Intervals [?]	157,188 / 159,264 (98.70 %)

Review of POD, FAR, CSI

- POD = A/(A + B) : 0 is worst, 1 is best

- FAR = C/(A + C) : 0 is best (no false alarms), 1 is worst

- CSI = A/(A + B + C) : 0 is worst, 1 is best
  Bonus: Bias is (A + C)/(A + B)

Obs\Forecast	Forecast says "YES!"	Forecast says "NO!"
Observation says "YES!"	A	B
Observation says "NO!"	C	Not represented in POD, FAR or CSI

Examples of Using Specific Thresholds

- Ceilings Below 2000 Feet (Extra Fuel Requirement):

Examples of Using Specific Thresholds - Output

- Ceilings Below 2000 Feet (Extra Fuel Requirement):

2x2 CRITICAL THRESHOLD DATA

TAF

OBS\FORECASTS	< 2000	>= 2000	Total
< 2000	3.88	3.25	7.13
>= 2000	5.08	87.79	92.87
Total	8.96	91.04	100.00

POD [?] (< 2000)	0.544
FAR [?] (< 2000)	0.567
CSI [?] (< 2000)	0.318
2x2 Heidke Skill Score [?]	0.438

GFS LAMP

OBS\FORECASTS	< 2000	>= 2000	Total
< 2000	3.35	3.79	7.13
>= 2000	3.62	89.25	92.87
Total	6.96	93.04	100.00

POD (< 2000)	0.469
FAR (< 2000)	0.519
CSI (< 2000)	0.311
2x2 Heidke Skill Score	0.435

More Critical Threshold – Airport Landing Minimums

- Many airports have landing minimums of 200 feet (can be seen by looking at VLIFR in Stats on Demand)

- Some airports have different landing minimums not corresponding to a threshold associated with VLIFR, LIFR or IFR.

- Example: MSO (Missoula) – 300 foot CAC ceiling (Threshold A – Landing Minimums)

Ceiling Threshold for Airport Landing Minimum - Output

- Generally under-forecasting cigs < 300 feet
- GFS-LAMP is not included since 300 feet is not one of its category thresholds

⊗ 2x2 CRITICAL THRESHOLD DATA

TAF

OBS\FORECASTS	< 300	>= 300	Total
< 300	0.24	4.00	4.23
>= 300	0.66	95.11	95.77
Total	0.89	99.11	100.00

POD [?] (< 300)	0.056
FAR [?] (< 300)	0.734
CSI [?] (< 300)	0.049
2x2 Heidke Skill Score [?]	0.079

Heidke Skill Score: -∞ to 1 (1 is best, 0 is no skill, -∞ is evil)

What About Both CIG & VIS Thresholds for Flight Category?

- You can select thresholds for both ceiling and visibility

- Slight limitation in the visibility (no 8th miles)

- Otherwise, same rules apply

- Example: Crescent City, California (CEC) landing minimums are 300 feet and ¾ mile:

Flight Category - Output

	TAF		
OBS\FORECASTS	CIG <300 or VIS <¾	CIG >=300 and VIS >=¾	Total
CIG <300 or VIS <¾	0.05	0.16	0.21
CIG >=300 and VIS >=¾	0.35	99.44	99.79
Total	0.40	99.60	100.00

POD [?] (CIG < 300 or VIS < ¾)	0.231
FAR [?] (CIG < 300 or VIS < ¾)	0.876
CSI [?] (CIG < 300 or VIS < ¾)	0.088
2x2 Heidke Skill Score [?]	0.159

Important Nuances of Verification: RAW vs. Compared with Guidance

- RAW scores will almost always be best in fair weather
  - P6SM SKC is *usually* the easiest to forecast
  - Example—PHX (Phoenix!) in April 2022

MULTICATEGORY CONTINGENCY TABLES WITH ASSOCIATED SCORES

TAF

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0.00	0.00	0.00	0.00	0.00	0.00
LIFR	0.00	0.00	0.00	0.00	0.00	0.00
IFR	0.00	0.00	0.00	0.00	0.00	0.00
MVFR	0.00	0.00	0.00	0.00	0.00	0.00
VFR	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL	0.00	0.00	0.00	0.00	100.00	100.00
BIAS	0.000	0.000	0.000	0.000	1.000	----
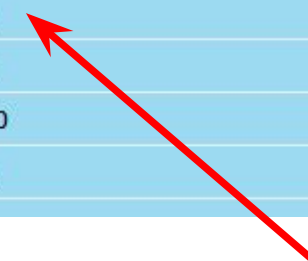
GFS LAMP

OBS\FORECASTS	VLIFR	LIFR	IFR	MVFR	VFR	TOTAL
VLIFR	0.00	0.00	0.00	0.00	0.00	0.00
LIFR	0.00	0.00	0.00	0.00	0.00	0.00
IFR	0.00	0.00	0.00	0.00	0.00	0.00
MVFR	0.00	0.00	0.00	0.00	0.00	0.00
VFR	0.00	0.00	0.00	0.00	100.00	100.00
TOTAL	0.00	0.00	0.00	0.00	100.00	100.00
BIAS	0.000	0.000	0.000	0.000	1.000	----

Important Nuances of Verification: RAW vs. Compared with Guidance

- RAW scores will almost always be best in fair weather
  - P6SM SKC is *usually* the easiest to forecast
  - Example—PHX (Phoenix!) in April 2022

CONTINGENCY TABLES SCORES (TAF / GFS LAMP)	
Percent Hits [?]	100.00 / 100.00
Percent >1 Category Errors [?]	0.00 / 0.00
Peirce Skill Score (PSS) [?]	--- / ---
5-category Gerrity Skill Score (GSS)) [?]	--- / ---
5-category GSS delta [?]	--- / ---
3-category GSS [?]	--- / ---
3-category GSS delta [?]	--- / ---
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	0.00
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	0.00
TAF = GFS LAMP = OBS [?]	100.00
TAF = GFS LAMP <> OBS [?]	0.00

With More Clouds and "Weather" It's Sometimes Easier to Beat GFS LAMP

- PDT (Pendleton, OR) – Jan/Feb/Mar 2022:

CONTINGENCY TABLES SCORES (TAF / GFS LAMP)

Percent Hits [?]	80.47 / 78.46
Percent >1 Category Errors [?]	6.32 / 7.41
Peirce Skill Score (PSS) [?]	0.485 / 0.457
5-category Gerrity Skill Score (GSS)) [?]	0.559 / 0.587
5-category GSS delta [?]	0.000 / 0.000
3-category GSS [?]	0.665 / 0.683
3-category GSS delta [?]	0.000 / 0.000
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	8,546 (8.77 %)
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	5,977 (6.13 %)
TAF = GFS LAMP = OBS [?]	72,242 (74.12 %)
TAF = GFS LAMP <> OBS [?]	10,697 (10.98 %)

Viewing Your Personal Statistics

- You should have "My Verification" available…

- If you are the aviation program manager or in management (MIC/SOO/WCM), you should be able to view stats for other forecasters

- The website is a little slower here (especially when looking at longer periods of time)

Results

OBS\FORECASTS	1	2	3	4	5	6	TOTAL
TAF							
<200 (1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200-400 (2)	0.00	0.80	0.15	0.00	0.00	0.21	1.16
500-900 (3)	0.00	0.49	0.31	0.08	0.00	0.53	1.41
1000-1900 (4)	0.00	0.00	1.76	3.09	3.55	1.52	9.91
2000-3000 (5)	0.00	0.00	0.00	1.85	7.35	1.38	10.58
>3000 (6)	0.00	0.24	0.40	1.07	10.64	64.59	76.93
TOTAL	0.00	1.53	2.62	6.08	21.54	68.23	100.00
BIAS	0.000	1.314	1.861	0.614	2.035	0.887	----

CONTINGENCY TABLES SCORES (TAF / GFS LAMP)	
Percent Hits [?]	76.14 / 75.23
Percent >1 Category Errors [?]	3.96 / 7.20
Peirce Skill Score (PSS) [?]	0.535 / 0.464
6-category Gerrity Skill Score (GSS)) [?]	0.299 / 0.374
6-category GSS delta [?]	0.004 / 0.004
3-category GSS [?]	0.670 / 0.537
3-category GSS delta [?]	0.002 / 0.002
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	12.85
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	9.20
TAF = GFS LAMP = OBS [?]	66.96
TAF = GFS LAMP <> OBS [?]	11.00

Wind Speed

- Example: Great Falls, MT (KGTF) 1 Jan-1 Jun 2022

TAF

OBS\FORECASTS	<8	8-12	13-17	18-22	23-27	28-32	>32	TOTAL
<8	12.26	14.54	2.88	0.26	0.13	0.02	0.00	30.11
8-12	4.41	15.86	6.32	1.21	0.40	0.10	0.01	28.31
13-17	0.85	6.96	9.02	3.38	1.24	0.24	0.03	21.72
18-22	0.10	1.17	4.36	4.09	2.27	0.84	0.14	12.97
23-27	0.01	0.18	0.76	1.80	1.35	0.91	0.09	5.09
28-32	0.00	0.00	0.01	0.32	0.74	0.40	0.03	1.51
>32	0.00	0.01	0.02	0.03	0.13	0.10	0.02	0.30
TOTAL	17.63	38.72	23.38	11.07	6.27	2.61	0.31	100.00
BIAS	0.586	1.368	1.077	0.854	1.232	1.731	1.038	----

GFS LAMP

OBS\FORECASTS	<8	8-12	13-17	18-22	23-27	28-32	>32	TOTAL
<8	19.50	9.81	0.77	0.02	0.00	0.00	0.00	30.11
8-12	6.80	15.30	5.23	0.84	0.11	0.03	0.00	28.31
13-17	0.89	6.12	8.85	4.71	0.89	0.18	0.08	21.72
18-22	0.09	1.19	3.44	5.12	2.41	0.54	0.19	12.97
23-27	0.00	0.07	0.38	2.04	1.86	0.58	0.16	5.09
28-32	0.00	0.00	0.03	0.24	0.79	0.38	0.06	1.51
>32	0.00	0.00	0.02	0.02	0.12	0.11	0.02	0.30
TOTAL	27.29	32.49	18.72	12.99	6.18	1.82	0.51	100.00
BIAS	0.906	1.148	0.862	1.002	1.215	1.209	1.684	----

Wind Speed

- Example: Great Falls, MT (KGTF) 1 Jan-1 Jun 2022

CONTINGENCY TABLES SCORES

Percent Hits [?]	43.00 / 51.04
Percent >1 Category Errors [?]	11.18 / 6.86
Peirce Skill Score (PSS) [?]	0.260 / 0.361
Gerrity Skill Score (GSS)) [?]	0.385 / 0.464
GSS delta [?]	0.000 / 0.000
TAF Better Than GFS LAMP (TAF > GFS LAMP) [?]	18.09
TAF Worse Than GFS LAMP (TAF < GFS LAMP) [?]	28.93
TAF = GFS LAMP = OBS [?]	28.48
TAF = GFS LAMP <> OBS [?]	24.50

☆ POD-FAR-CSI SCORES (TAF / GFS LAMP)

| Scores\Wind Speed	>27 knots	>32 knots
Probability of Detection (POD) [?]	0.302 / 0.319	0.058 / 0.076
False Alarm Ratio (FAR) [?]	0.813 / 0.752	0.944 / 0.955
Critical Success Index (CSI) [?]	0.130 / 0.162	0.029 / 0.029
% Improvement TAF CSI over GFS LAMP	-19.53	0.76

☆ MEAN ERROR DATA BY OBSERVED SPEED

TAF

CATEGORY	<8	8-12	13-17	18-22	23-27	28-32	>32	OVER-ALL
Mean Algebraic Error [?]	4.1	1.1	-0.2	-0.7	-2.2	-4.4	-8.5	1.2
Mean Absolute Error [?]	4.3	2.9	3.6	4.5	4.7	4.9	8.5	3.8
Root Mean Square Error [?]	5.5	4.1	4.6	5.5	5.8	5.9	9.7	5.0

Example Graphic from a TAF Verification Report

- Verification website will give you the data but not the graphic…

Percent Hits for 12-Month Period Ending 30 Sep for Flight Category (2013-21, 6 Airports)
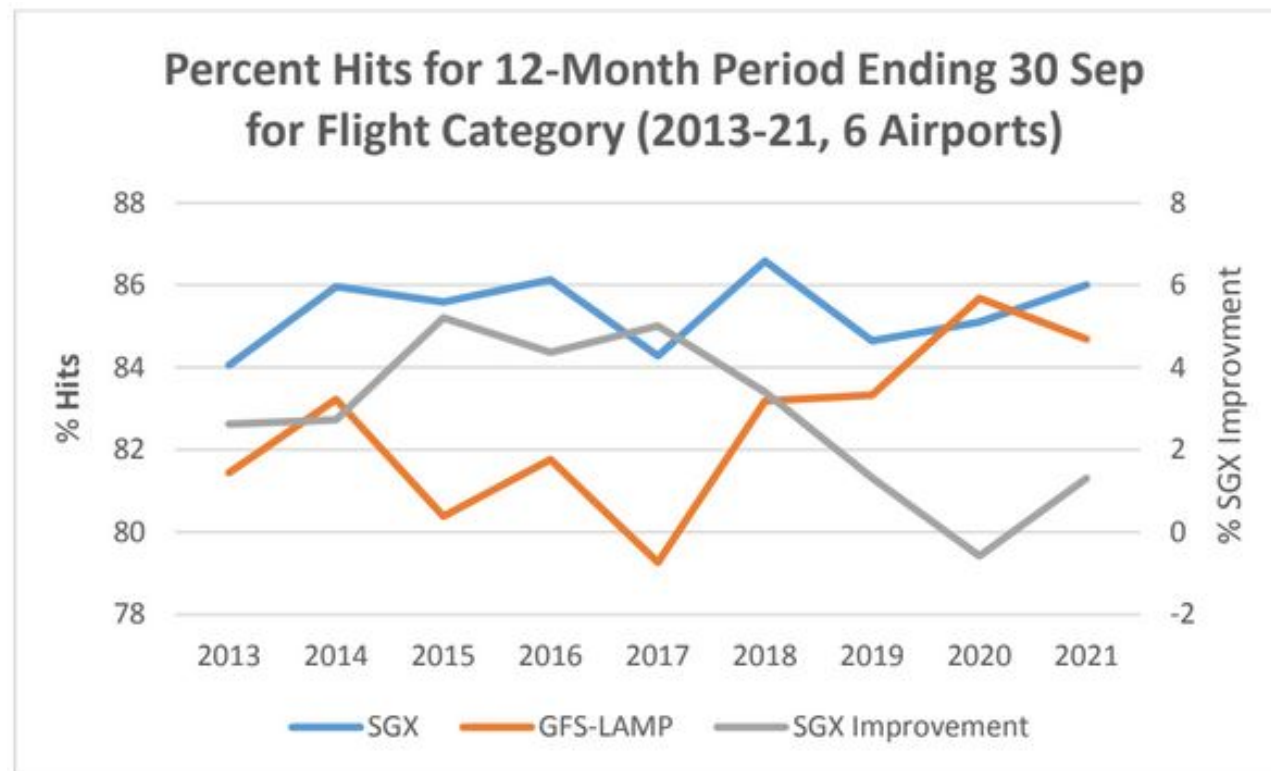
Issues with Moving to a New Office

- Forecaster needs to reset their office affiliation
- Click "Account" by your name after you log in, then click "Update your profile information"

Profile Information

- Note that you might need to change your forecaster ID at a new office (contact AWIPS focal point)

Logins Every 18 Months

- The verification website will disable your username/password if you don't log in for 18 months

Source: India TV News

Strategies/Questions

- How often should you do aviation verification for an office?
- What do you do when a certain forecaster is performing less well than others?
- What strategies do you have to improve the TAF verification?
- And how does this affect DSS?

But…Before You Get Too Excited…

- System Outage Saturday-Monday Due To Maintenance

Hello Brandt Maxwell ,

The Performance Management Website will undergo routine maintenance this weekend to comply with the latest security protocols. This will result in the website being inaccessible from roughly 10am EDT Saturday (6/11/22) to sometime Monday (6/13/22). In addition, it will take some time for the data to catch up, so there could be residual issues into midweek.

We apologize for the inconvenience, but we appreciate your patience and understanding as we implement these critical changes to our servers.

Another reminder will be sent later this week.

Have a great day!

Questions?

- Send them to Brandt.Maxwell@noaa.gov
- Charles.Kluepfel@noaa.gov is the NWSHQ contact (technical assistance)

Source: Denverpost.com