



# Assessing Forecast Impact on Operations

- Part of QC'ing TAFs before dissemination
  - Default checks on TAFs are from NWSI 10-813
    - Fuel-Alternate
      - vsby < 3 miles or ceilings < 2000 feet
    - LIFR Condition
      - vsby < 1 mile or ceilings < 500 feet
- More sophisticated checks are possible and can be tailored to airports having unique operational constraints

# TAF Impact Writing

- A forecast of strong crosswinds at a major hub can cause ground delays. Use BOS as an example.
  - Need runway orientations to calculate wind components perpendicular and parallel to runway(s)



TAF Site Info Editor

Site Id

TAF Headers

WMO  AFOS  TAF Duration Hours

Thresholds

Visibility  Ceiling

Radar Cutoff  Profiler Cutoff

Geography

Latitude  Longitude  Elevation  Runway(s)

Runway 4R/22L referenced as [0]  
Runway 9/27 referenced as [1]  
Runway 15R/33L referenced as [2]

# TAF Impact Writing

wind[n].cross = crosswind for runway #n  
wind[n].runway = parallel component to runway #n  
wind[n].shift = tail-to-head or head-to-tailwind change  
from last forecast group (T or F)

- Edit /awips/adapt/avnfps/etc/tafs/KBOS/impact.cfg

```
[conditions]
items=cond_1,cond_2,cond_3,cond_4
      :
      :
[cond_3]
tag=wshft
level=2
text=significant windshift on 15R/33L
expr=wind[2].shift and wind[2].runway>15
```

```
[cond_4]
tag=xw
level=3
text=significant crosswind on 15R/33L
expr=wind[2].cross>15
```

```
TAF
KBOS 181720Z 1818/1924 12015KT P6SM SCT040CB
FM182100 13020G30KT P6SM VCTS BKN030CB
TEMPO 1821/1822 1SM +TSRA OVC010CB
FM182230 25020G40KT 6SM +SHRA OVC020
FM190100 27020G30KT --- Impact ---
FM190500 28020G25KT significant windshift on 15R/33L
FM191200 30010KT P6SM SKC=
```

```
TAF AMD
KBOS 141321Z 1413/1518 06015G25KT P6SM SCT015 OVC025
FM141700 05025G35KT 4SM -RASN BR BKN008 OVC013
TEMPO 1422/1502 1 --- Impact ---
FM150200 03015G20K Fuel-Alternate
TEMPO 1502/1506 1 Significant crosswind on 15R/33L
```

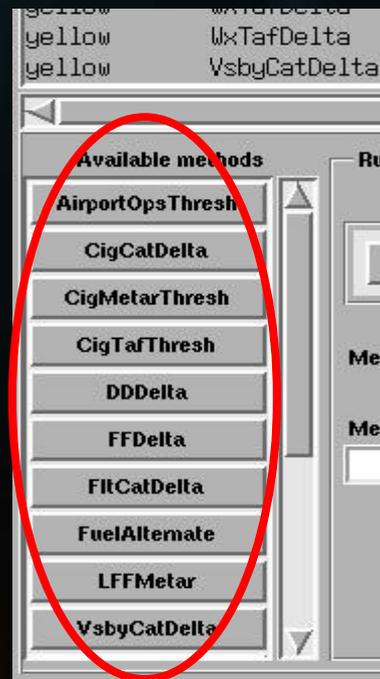
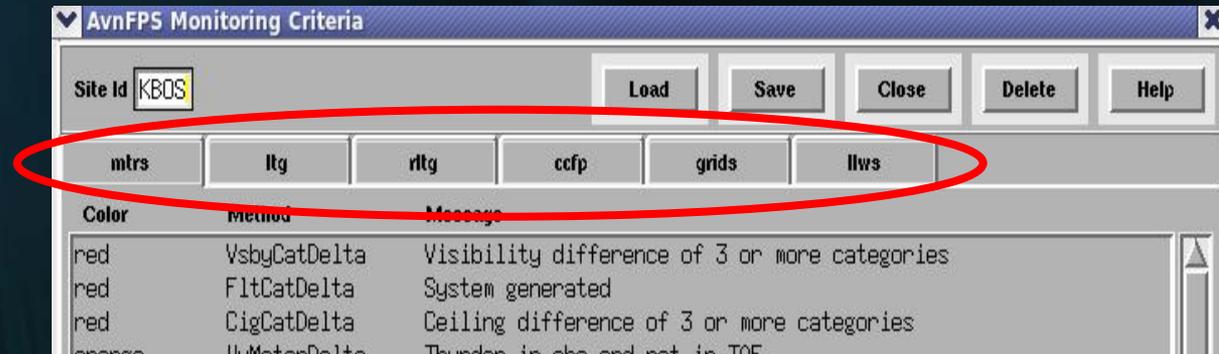
# TAF Impact Writing

- Elements of the TAF forecast groups can be examined and used in the 'expr' attribute of the impact rule
  - Presence of thunderstorms (ts) [True/False]
  - Visibility (vsby) [statue miles]
  - Ceiling Height (cig) [feet]
  - Wind (wind.shift,wind.cross,wind.runway) [knots]
- 'expr' is a Python expression that evaluates either True or False.

# Monitoring Customization

- AvnFPS Rule Editor allows customized rules on many sources

- METARs
- Lightning
- LLWS
- CCFP



- See AvnFPS User's Guide Appendix B for more details on these rules

# TAF Editor Tools

- Dropping new modules into the /toolpy directory will cause it to show up in the TAF Editor....



- More details on writing TAF Editor tools can be found in Appendix F of the AvnFPS User's Guide