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)

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

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