

**IAD Single Runway (Rwy) 30 Configuration Days – Impacts per FAA logs, Potomac TRACON  
(Day of or one day after strong cold frontal passage – 2014/15, 2015/16, 2016/17 cold seasons)**

**During the 2014/15, 2015/16, 2016/17 cold seasons (15 Oct – 15 Apr):**

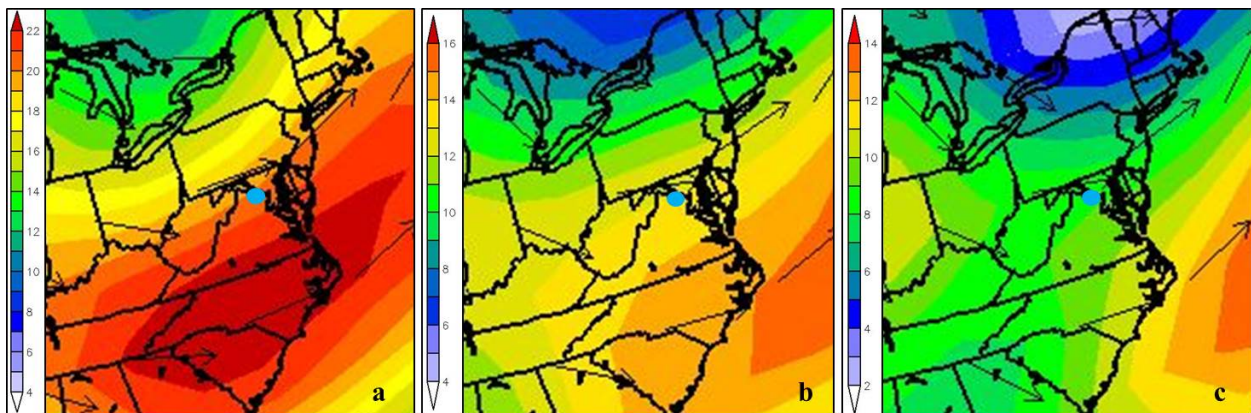
- There were 9 days when the passage of a strong cold front during the 09Z-18Z timeframe (early frofa) caused IAD to switch to a single Rwy 30 config for several hours
- There were 4 days (14 Feb 15, 7 Apr 16, 19 Nov 16, 15 Feb 17) when the passage of a strong cold front during the 18Z-00Z timeframe (late frofa) caused IAD to switch to single Rwy 30 config for at least part of the aftn/eve
- Single Rwy 30 config was required on 8 days the day after either a strong early or late frofa due to strong NW low-level flow

**Conditions that can cause IAD to switch to single runway 30 ops include:**

- Sustained wind  $\geq 25$  kts from  $280^{\circ}$ - $320^{\circ}$  (less favorable for a wind direction N of  $320^{\circ}$ /S of  $280^{\circ}$ )
- Gusts  $\geq 35$  kts from direction  $280^{\circ}$ - $320^{\circ}$  (less favorable for a wind direction N of  $320^{\circ}$ /S of  $280^{\circ}$ )
- Aircraft refusing Rwy 1s, circling/missed approaches due to unfavorable W-NW wind/crosswind
- Aircraft diverting from DCA due to/concurrent with unfavorable W-NW wind/crosswind

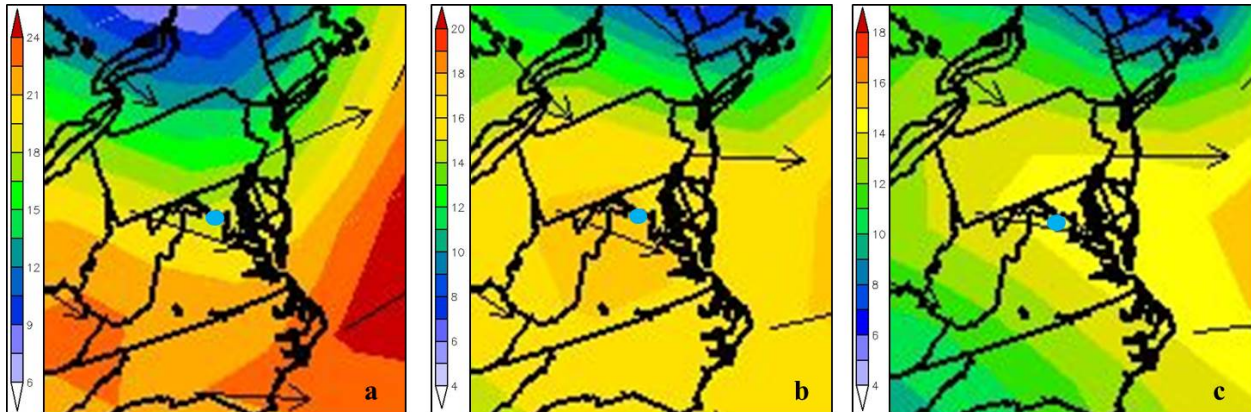
**\*\*When conditions may warrant a single Rwy 30 config, IAD tower personnel discuss potential traffic management initiatives with traffic management coordinators at the Air Traffic Control System Command Center, Potomac TRACON, Washington Air Route Traffic Control Center, affected airlines.\*\***

**ESRL NCEP/NCAR daily mean composites for strong Early cold front passages requiring Rwy 30 config:**



700 mb vector wind in  $\text{ms}^{-1}$  (a); 850 mb vector wind in  $\text{ms}^{-1}$  (b); 925 mb vector wind in  $\text{ms}^{-1}$  (c). Dates: 30 Jan 15; 2 Feb 15; 4 Apr 15; 29 Jan 16; 2, 28 Mar 16; 15 Dec 16; 26 Jan 17; 9 Feb 17. The light blue dot approximates the location of IAD.

**ESRL NCEP/NCAR daily mean composites for days after strong cold fronts requiring Rwy 30 config:**



700 mb vector wind in  $\text{ms}^{-1}$  (a); 850 mb vector wind in  $\text{ms}^{-1}$  (b); 925 mb vector wind in  $\text{ms}^{-1}$  (c). Dates: 18 Nov 14; 15 Feb 15; 26 Feb 16; 3 Apr 16; 22 Oct 16; 20 Nov 16; 13 Feb 17; 7 Apr 17. The light blue dot approximates the location of IAD.

**Resultant impacts of IAD single runway 30 ops include:**

- Ground stops (GS) for runway changes can become ground delay programs (GDPs), with average delays of 35-90 mins (maximum delays can extend beyond 120 mins)
  - o GS/GDPs can extend/apply to aircraft beyond 1000 nm from IAD (including Canada)
- AAR (Aircraft Arrival Rate – the number of arrival aircraft an airport can accept throughout any consecutive 60-min period) can drop to 26-32 for several hours during GDPs
  - o The 26-32 range equates to 27-42% of the normal AAR that a Rwy 1s (north) configuration would allow under VMC (visual meteorological conditions)
    - Using Rwy 1s the normal AAR is typically between 75 and 96
  - o Busy times – the 11 am, 3 pm and 5 pm banks – are significantly impacted by low AARs
- In lieu of a Rwy 30 config, increased miles-in-trail (MIT), i.e. increased miles of separation between arriving aircraft, is used to control the flow of aircraft landing at/departing from IAD
  - o Typical increased MIT is in the 5-15 nm range