BACKGROUND

- DCA Metroplex
- DCA and IAD - Federal Gov’t
- MWAA established and contracted to manage both airports
Background

• CWG started Oct 2015 – started 7th year

  intended to advance the noise discussion beyond past forums, which have centered on the airing of specific individual and neighborhood concerns, toward identifying and recommending practical noise-mitigation initiatives for the entire Reagan National area by the summer of 2016.

• DCA Hub Airport

• Slot control

• Beyond Perimeter Rule – 20+ flights/day
Challenges

- DCA 24x7 Ops
- Essentially single Rwy Ops 01/19
- Congressional influence
- DCA flights increasing while IAD stagnant
- P56
- Dense population north and south DCA
- FAA reluctant to flight procedure changes
- Heavy rotorcraft traffic - Pentagon, Bolling AFB, Fort Belvoir, EMS, Police
Typical 24 Hour DC Metroplex – 4300 tracks
DCA North Arrivals Rwy 01

DCA Arrivals
North Flow
24 Hours | July 23, 2015 | 454 Flights
DCA South Arrivals Rwy 19

DCA Arrivals
South Flow
24 Hours | July 29, 2015 | 440 Flights
DCA Departures North Rwy 01

DCA Departures
North Flow
24 Hours | July 23, 2015 | 468 Flights
DCA Departures South Rwy 19

DCA Departures
South Flow
24 Hours | July 29, 2015 | 454 Flights
Noise Complaints

- ~12,000 / month before COVID
- ~1,800 / month COVID
- ~3000 / month 2021 with increased Ops
- Submitted by mobile app or Web Trak
- No reply to Noise complaints – not practical
- FAA sends boiler plate letter response if contacted
DCA Web Track

http://webtrak5.bksv.com/dca
• CWG
  – Hosted and Facilitated by MWAA
  – Pre COVID
    • Monthly meetings 1-2 hours
  – COVID - $ impact to MWAA
    • Quarterly Zoom meetings
  – No $ to provide outside tech support
MWAA DCA CWG Reps

• 28 Reps – Primary and Alternate
• VA – Alexandria, Fairfax & Arlington County
• DC – DC Wards 2,3,6,7,8
• MD – PG and Montgomery County
• American Airlines
• Wash Metro Airlines Committee
• ID solutions and recommendations for FAA consideration and action.
Organization

CWG

NOA SC  FQ SC  SOA SC
FAA Role

- Non Voting member
- Provide SME
  - Operational issues
  - Procedural design
- Evaluate recommendations submitted to MWAA
- First 2-3 years consistent FAA CWG reps
  - variable representation year 4 +
CWG Recommendations

- 22 Recommendations
- Recommendation 1 December 2015
- Recommendation 22 July 2021
- 0 have been fully implemented
- FAA implemented US SS P56 request in 3 months
Flight Procedure Design Philosophy

• Maximize flight over water & compatible land uses
• Avoid overflights of schools, hospitals and/or churches.
• Equitable distribution of noise between populations
• Constant Descent Approach, Terminal Arrival Area, aircraft “marshal” and idle descent.
• Use of flight track variability when practical.
## Fly Quiet

**Benchmark “Study”**

<table>
<thead>
<tr>
<th>Initiative, Procedure or Technology</th>
<th>Airport Noise</th>
<th>Departure Noise</th>
<th>Arrival Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ground Operations</strong></td>
<td></td>
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<tr>
<td>Automated airplane tug</td>
<td>✓</td>
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<tr>
<td>Reduced APU use</td>
<td>✓</td>
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<tr>
<td>Thrust reversal limitations at night</td>
<td>✓</td>
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<tr>
<td>Taxi speed limits</td>
<td>✓</td>
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<tr>
<td><strong>Departure Operations</strong></td>
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<tr>
<td>Departure management collaboration</td>
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<td></td>
<td>✓</td>
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<tr>
<td>Thrust managed climb</td>
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<td>✓</td>
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<tr>
<td>RNAV departures</td>
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<td>✓</td>
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<tr>
<td>Continuous climb operations (CCO)</td>
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<td></td>
<td>✓</td>
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<tr>
<td>Departure path alternation (noise sharing)</td>
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<td>✓</td>
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<tr>
<td><strong>Arrival Operations</strong></td>
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<tr>
<td>Arrival path alternation (noise sharing)</td>
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<td>✓</td>
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<tr>
<td>Arrival management collaboration</td>
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<td>✓</td>
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<tr>
<td>Low power/low drag operations</td>
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<td></td>
<td>✓</td>
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<tr>
<td>‘Quiet’ landing gear</td>
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<tr>
<td>Continuous descent operations (CDO)</td>
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<tr>
<td>Optimised profile descent</td>
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<tr>
<td>Two-segment (dual slope) approach</td>
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<tr>
<td>RNAV/RNP approaches</td>
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<tr>
<td>Tailored arrivals</td>
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<td>✓</td>
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<tr>
<td>Displaced threshold</td>
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<tr>
<td><strong>Other Considerations</strong></td>
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<tr>
<td>Preferential runways</td>
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<tr>
<td>Noise constrained operating times</td>
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<td>Important and innovative technologies</td>
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<tr>
<td>1.</td>
<td>CDFA/OPD/CDO</td>
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<td>2.</td>
<td>NADP, NADP 1, 2, current or Custom</td>
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<td>3.</td>
<td>Three north flow departure procedures/alternate</td>
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<td>4.</td>
<td>Runway assignment analysis/recommendations</td>
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<td>5.</td>
<td>Minimum Downwind Leg Altitude</td>
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<td>6.</td>
<td>Night Time Flight Limits and Procedures</td>
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<td>7.</td>
<td>Fly Quiet Air Carrier Assessment</td>
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<td>8.</td>
<td>Ground-Based Augmentation System</td>
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<td>9.</td>
<td>Noise Monitor Relocation/additional Noise Monitors</td>
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<td>10.</td>
<td>FQ Manual</td>
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</tbody>
</table>

All “rejected”
Factors Affecting CWG Progress

- FAA reactive organization not proactive
- .41 and FAA project priorities and processes
- NEXT GEN Flight Procedure priority
  1. Safety
  2. Efficiency – airplanes to destination faster – less fuel
  3. Noise impact 80/20 “rule”
- FAA - noise = dBa exceedance – does not address repeat/frequent event impact
- NOAA SC Consultant
- COVID
Need for Tech Expertise

- CWG requested MWAA fund expert to provide Tech support.
- MWAA agreed to consider its A&E firm
- SOW provided to MWAA BOD
- COVID $ impact killed tech assist
- NOA SC (Montgomery and Arlington County funded) own contractor
- SOA SC considering
DCA Night Time Curfew Not Option

• Curfew Does not exist – Stage 3 -10 PM – 7 AM

• 3 ways to restrict night operations
  1. Airline Agreement
  2. Act of Congress
  3. Complete FAA Part 161 Study.
     ➢ Part 161 is complicated, lengthy and costly
     ➢ Over 20 major airports have attempted Part 161
     ➢ No Part 139 airport has successfully satisfied all 6 requirements.
Ideal Scenario

- Noise “footprint” for RNAV procedures
- NADP 1 OR 2
- Keep departures centered over river
- Increase departure altitude before turn
- Move transition turn points
- Constant Descent Approach
- DCA Fly Quiet program
- Annual Airline report card
- Permanent Advisory Group
Questions?