

**NAS**Operations  
ATO SysOps



# 2023 East-North SWAP Briefing



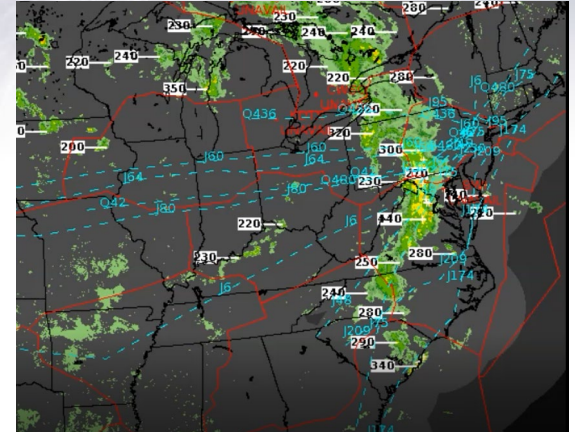
**FAA**  
Air Traffic Organization

# Strategic and Tactical Focus for 2023

- **Day Prior - Leverage available information**
- Show weather and scheduled demand during PERTI and assess risk
  - Take action the day before as needed
- **Day of Event - Timeline for action**
  - Working through a schedule of calls
  - Checklist items developed and briefed
  - Protect the most vulnerable times and airports
- **Additional Considerations**
  - Identify additional system constraints that diminish resiliency
    - Airport construction, VIP, Launches (Increase), Special Events etc.

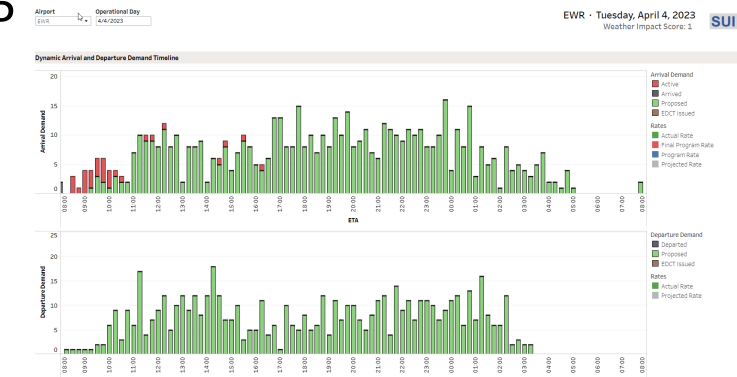
# Planning- PERTI Call (Day Prior)

- Discuss SWAP probabilities
- Identify
  - Timing / Location / Direction of Movement
- Identify additional constraints
  - launches, construction, equipment outages, VIP, special events, etc.



DCA	--	ZDC	04/17/2023	04/30/2023	RWY 01/19 Closure
DFW	--	ZFW	04/07/2023	05/27/2023	High speed Q3 Closure
DFW	--	ZFW	02/24/2023	07/03/2023	TXY Z Bridge & JY CLSD/TXY G Restriction

- Show projected traffic demand
  - broken down by hours for duration SWAP
  - Include recovery time



# Planning- PERTI Call (Day Prior)

- Cover playbooks (fractional/full) to be used.
  - Advisories for next day may/should be considered/implemented at this time.
- Advise operators - prioritize weather routes - expediting re-routes through dispatch.
  - Plan (fuel) for weather related routing.

# Planning – Day of

- **0730L** Internal Service Area call
  - Increased focus on current days operation.
  - PERTI items and updates included.
- **1015L** call with dispatch will be driven by the ZNY meteorologist and TMU.
  - Route/fix impacts and mitigations including secondary and tertiary route filing recommendations.

# Planning – Day of

- **1100L** checklist call with facilities
  - all parties concur with actions or present viable alternatives with observable results
- **1115L** SPT brief out results
  - Discuss - Adjust/Add Timing of mitigations to manage operations. [What if's and actions that will result])

# Sample Checklist

## NE Departure Delay Mitigation TELCON Checklist / SPT Prep

Attendees:

DCC \_\_\_\_\_ ZNY \_\_\_\_\_ ZBW \_\_\_\_\_ ZOB \_\_\_\_\_ ZDC \_\_\_\_\_

N90 \_\_\_\_\_ PCT \_\_\_\_\_ PHL \_\_\_\_\_ NWS \_\_\_\_\_

1. NWS briefing on forecast and possible impacts
2. DCC outlook: Possible low altitude escape route (SERMN, GREKis)
  - a. AFP outlook
  - b. Holding Advisory(s)
  - c. Possible offload routes through ZBW
  - d. Check/verify the availability of CAN Routes
  - e. GDPs/GS currently in place and expected
  - f. Deepwater options
  - g. Discuss triggers for possible TMIs
    - i. Discuss Permeability through ZDC and ZOB, if necessary
    - ii. Staffing
3. Check in with ZNY and N90 for possible concerns with Forecast and the outlook for NY Metro airports
  - a. Are SWAP statements issued for ZNY/ ZDC / ZBW
  - b. International SWAP Statements
4. PHL Outlook
  - a. Plan for PHLYERS, DQO routes if MXE and PTW are expected to be impacted
5. PCT Outlook
  - a. DCA Throughput
  - b. IAD International Departures
  - c. Possible LIMBO routes or departure routes

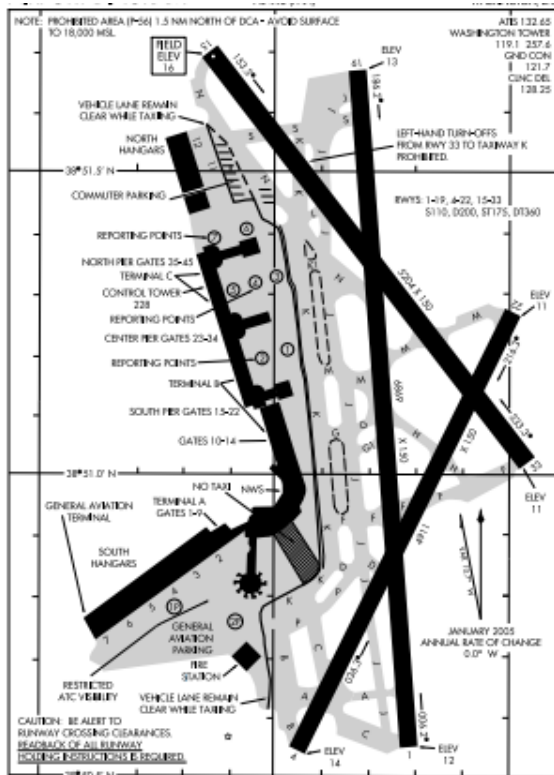
# Planning – Day of

- **1300L (NLT target)**. Higher probability of high impact = Earlier action required.
  - LGA initiatives start
  - Playbooks (full/fractional)
  - Alternate low altitude
  - Top 5 destination strategy
- **1400L NLT**
  - ZDC Capping / Tunneling
  - PHL escape routes? What's available?
  - North bound traffic affected?
  - NY SATs? Impacts? Mitigations?



# Prioritization

- Identify airports with additional risks and recovery challenges.
  - Existing surface constraints, construction and international departures.



# Additionally

- Keep focus on escape routes
  - DITCH relief (J528?)
  - South to go west (ABI, BUT?)
- Increase/manage use of offshore/WATRS



# SERMN S Procedure

## **Use of SERMN South and Required versus Recommended.**

In order to make advantageous use of SERMN South routes, it is important to transition from recommended to required prior to the time of anticipated impact/constraint.

Historically, advertising the route as recommended has yielded little benefit. Additionally, the approach controls involved had complained about the lack of predictable volume when the routes are recommended.

We did a fair amount of outreach to the airlines to see how much lead time was needed to prepare for usage of the route as required and it was determined that 45-60 minutes was sufficient. As a result, in the years before the pandemic it became standard practice to issue the route as recommended and transition to required within 60 minutes. We need to return to this practice both during SWAP and Snowbird. What needs to be discussed in lieu of this process is the scope. More often than not the scope would be one of these options; ORF and North, RDU and North, or full playbook. That determination would need to be made based on intent and constraint. An example would be, during a normal Snowbird morning departure push ORF and North should be sufficient.

# ZNY FOCUS ITEMS

- ROUTE CLOSURES/OPENINGS
  - Pathfinders
- ROUTES CALL AND EARLY ACTION
- UTILIZING DIVERSE DEPARTURE FIXES OUT OF NY
- LOW ALTITUDE ESCAPE ROUTES

# Route Closures and Openings

## Pathfinders



- Can You Open The Route Without a Pathfinder?
- Make Sure the Aircraft is Willing to be a Pathfinder
- Communicate the Pathfinder Information to STMC, Appropriate TRACONS
- Monitor the Pathfinder
- Consider Pathfinders Airborne (ex: ZBW traffic, Traffic on J48 move to Q75)
- Attempt to get a Pathfinder with Efficient Airborne Possibility

*note: PHL, TEB, HPN may be quicker options*



- Limiting re-routes based on input from meteorologist.
  - Limit effect of increasing MIT before route closes
- Project fix openers (pathfinders) based on forecast weather by ZNY/ZDC/ZBW meteorologist

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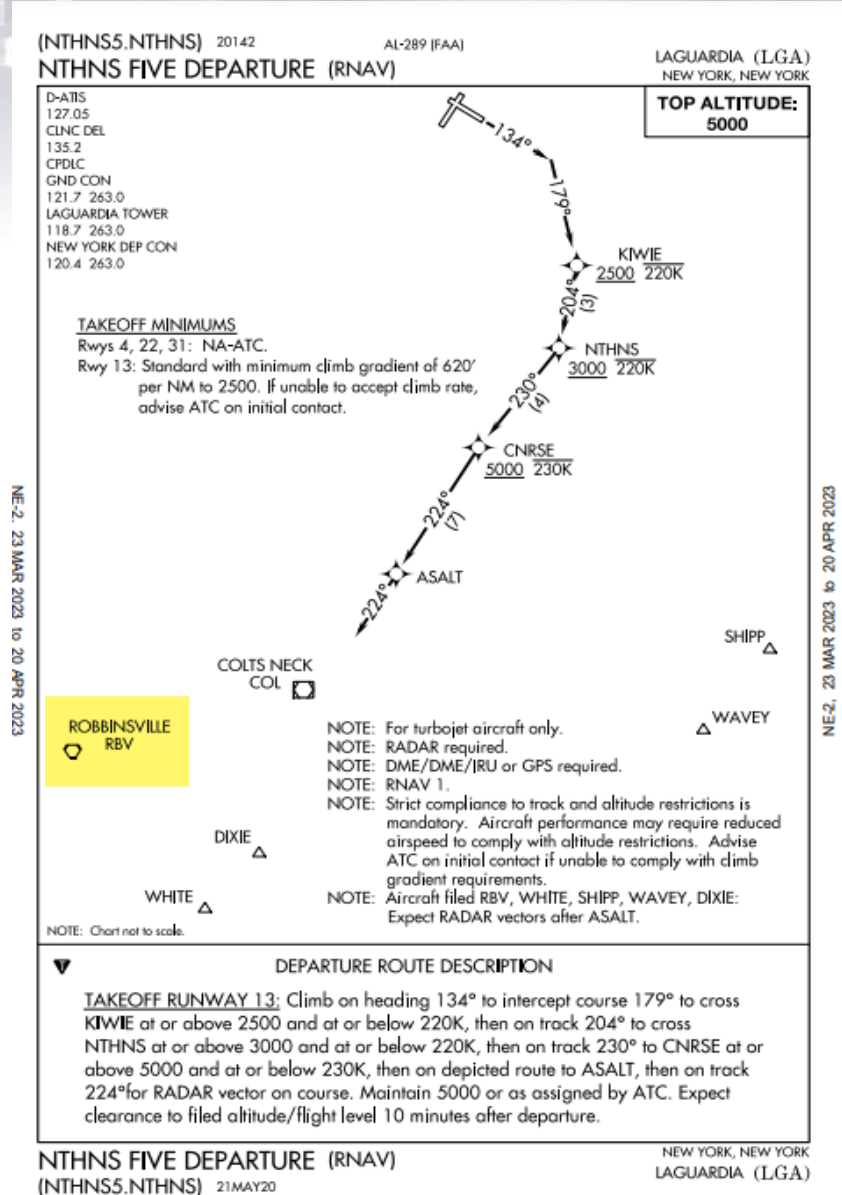
*note: PHL, TEB, HPN may be quicker options*



- Use airborne inventory to re-open routes when practical
- Consider proximity/flexibility when choosing a pathfinder.
  - PHL for ZDC stop
  - TEB for quicker release.

# UTILIZING DIVERSE DEPARTURE FIXES OUT OF NY

- Give up RBV for LGA
  - Move LGA to RBV, JFK to WAVEY
    - short period as conditions allow.
- TEB / HPN High Altitude Escape
  - NOT Available when GREKI's (1,2,3) / CAN West Plays in use
  - Limited, no more than 2 departures per hour



# ZNY TASKING

- 1015L ZNY CALL WITH DISPATCH
  - Discuss the timing of diminished capacity on routes/fixes
  - Identify secondary/tertiary routes to be fueled for
  - Include additional constraints (launch, Mil, VIP)
  - Brief the plan for low altitude routes.



# NY Low Altitude Options

## Routes

DESTINATION	ROUTING	ALTITUDE
SYR	HAAYS.V252.CFB.V29.SYR..KSYR	10000/CAP FL220 WHEN ABLE
BUF	HAAYS.V252.CFB..KBUF	10000/CAP FL220 WHEN ABLE
CYYZ	HAAYS.V252.CFB..WOZEE..LINNG..CYYZ	10000/CAP FL220 WHEN ABLE
ROC	HAAYS.V252.GIBBE..KROC	10000/CAP FL220 WHEN ABLE
PIT	HAAYS.V252.RAGER.T216.LAAYK.T218.SFK..SLT.HAYNE7.KPIT	10000/CAP FL220 WHEN ABLE
CLE	HAAYS.V252.RAGER.T216.LAAYK.T218.SFK..THOME.TRYBE4.KCLE	10000/CAP FL220 WHEN ABLE

# COMMON SUMMER PLAYBOOK “PLAYS” FOR N90/PHL

- GREKI 1, GREKI 2, GREKI 3
- TRANSCON (CAN) ROUTES- EAST/WEST & WEST/EAST
- SERMN Escape Routes
- PHLYER Escape routes
- Duct Routes
- CAP / Tunneling

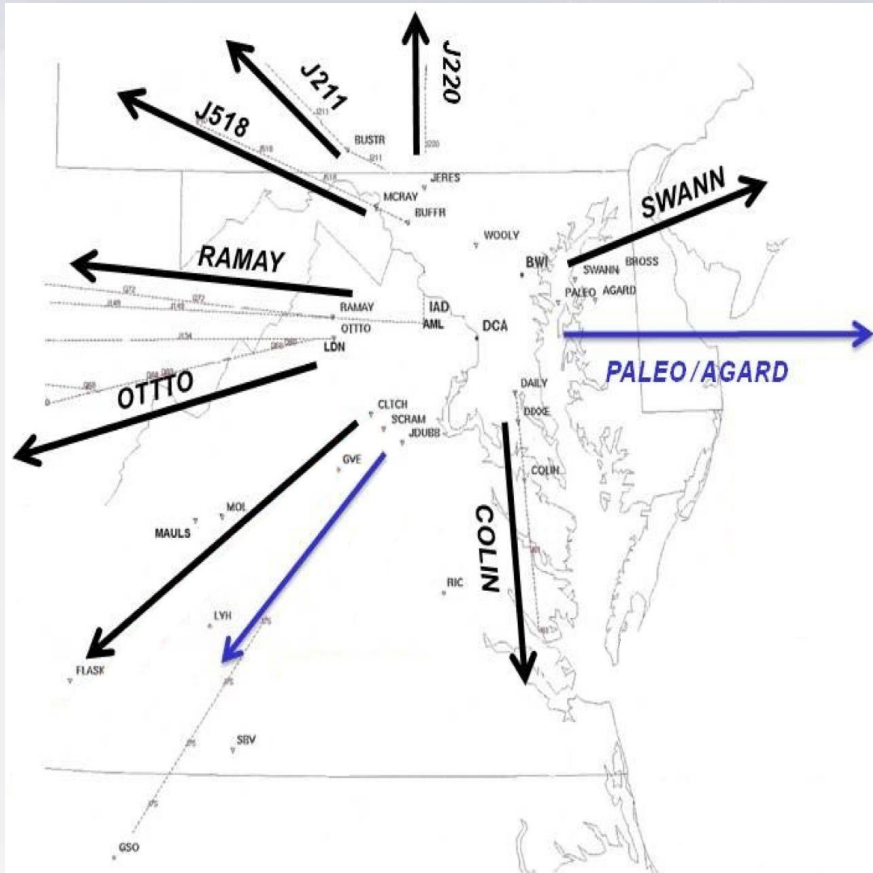
Additional Playbooks/Plays can be found in the Area Guidebooks or at <http://www.atcsc.faa.gov/PLAYBOOK/pbindex.html>

# ZDC FOCUS ITEMS

- EARLY OFFLOADS
- CAPPING AND TUNNELING
- DCA SURFACE
- IAD INTERNATIONAL DEPARTURES
- OBX – OUTER BANKS (ZDC30)
- TRAJECTORY OPTION SET (TOS)

# ZDC FOCUS ITEMS

- EARLY OFFLOADS



ZDC NAS Monitor (Relative Time Range)

Functions Customize Help

Display Range: 2.25 hours | Show only if alerted in next 2.25 hours (Time Limit) | Updated: 1311

Select Elements | Show All Baselines | Sort By: Area

04	21/21	13	15	24	20	17	12	10	14	13
10	14/14	8	11	11	12	9	9	12	8	9
12	16/16	11	5	8	8	9	11	11	14	11
17+	12/12	7	10	6	7	3	3	8	10	7
19+	17/17	16	17	16	15	16	13	14	16	21
16	17/17	12	7	10	14	9	8	14	11	12
20+	17/17	14	8	13	13	13	14	15	16	17
27	11/11	3	7	5	7	5	7	7	3	4
36	17/17	8	18	16	16	12	18	13	12	14
38	15/15	7	4	7	12	9	11	13	13	10
09+	22/22	19	23	24	20	23	21	16	22	27
25+	17/17	7	6	8	11	10	11	11	5	8
34+	18/18	15	18	24	26	20	12	17	18	27
35+	20/20	20	18	20	23	27	23	18	14	17
50+	21/21	16	19	20	21	11	11	19	23	16
23	14/14	6	12	9	6	6	7	5	5	4
39	18/18	11	15	21	14	12	12	25	17	13
51+	14/14	11	8	6	4	5	6	6	4	5
54	18/18	9	11	21	21	14	11	19	26	17
58	14/14	8	17	15	13	11	19	15	14	13
59+	16/16	13	16	14	16	15	20	14	17	13
07	21/21	16	14	19	21	22	18	14	14	14
32+	17/17	12	19	14	13	14	12	11	9	14
60+	14/14	10	12	12	12	11	11	8	10	8
72	20/20	4	13	15	9	17	15	10	10	10
03	15/15	17	21	20	16	12	11	9	9	15
05+	12/12	12	11	9	12	13	14	10	8	12
15+	12/12	5	7	4	4	8	8	8	6	10
37	12/12	8	11	10	10	9	8	9	12	13
42	15/15	7	6	10	8	6	5	5	8	6
		1300	1315			1400	1415	1430	1445	1500

# ZDC FOCUS ITEMS

- **EARLY OFFLOADS:**

- If weather would impact a departure gate, for instance OTTTO / RAMAY then the departures would be rerouted via CDR out through another open departure gate, via CLTCH and J518 depending on sector workload and destination.
- If CLTCH and JDUBB would be impacted, reroutes via COLIN/SCOOB and OTTTO would be implemented.
- In an more widespread weather constraint, a mass of thunderstorms across western ZDC stopping J220, J211, J518, RAMAY OTTTO CLTCH AND JDUBB, might see an aircraft looking to go to Chicago depart almost opposite direction down to the SE over COLIN/SCOOB, crossing through Areas 2 and 3 before turning back to the NW.
- However, on most days early offloads for DC METS comes via way of rerouting off one departure fix to the other (e.g. off SCOOB to JDUBB - inland) to allow for overhead volume (traffic via AR/Y routes) from ZNY & ZBW.

# ZDC FOCUS ITEMS

- **CAPPING & TUNNELING: *TEDC “GO-TO INITIATIVE”***
  - Used more frequently now because of the high volume of high-performance general aviation aircraft.

Removes volume from high altitude sectors, reduces complexity, and utilizes airspace within the low altitude sectors that are normally underutilized. It essentially creates more space in the high altitude sectors to be used for flights sometimes captured by AFPs. Thus, increasing total airspace throughput, since both overflights and departures may flow simultaneously in lieu of stopping departures to favor the overflight traffic.

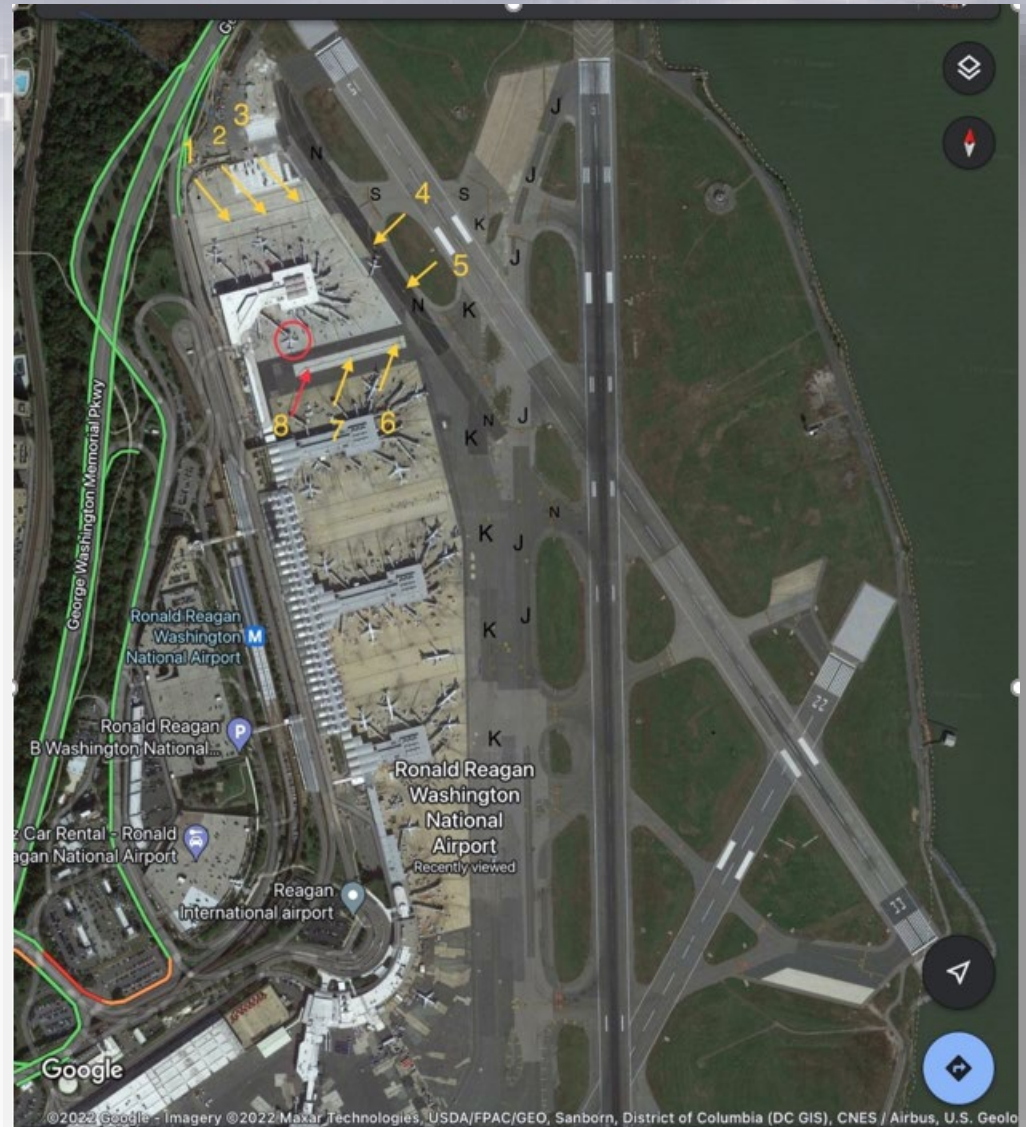
Capping is favorable to both the operations and the stakeholders as system impact is distributed. Delays are reduced, and fuel usage is minimized. Flows remain on preferential routes.

# ZDC FOCUS ITEMS

- **CAPPING & TUNNELING: *TEDC "GO-TO INITIATIVE"***
  - The PCT Euro Tunnel for the DC Mets going overseas. These flights are tucked going north AOB FL230 via J220 as opposed to Q34 or J174. Often used when weather is developed in the Eastern portion of ZDC.
  - The PHLER South 1/2 plays assist in keeping the volume out of ZDC Area 4 by capping PHL departures at 8,000ft or 6,000ft. These flights are destined for airports as far South as CLT/ILM. They are also a commonly used play during SWAP and high east coast volume days.
  - RAM/OTO departures with "LIMBO WEST" route playbooks are capped at 100 in lieu of typical climb to 170 - FL230 with climb clearances west of J109. (From this came LIMBO South, Southwest, North and soon to be NW via ZOB)
  - SCOOB/COLIN departures are often capped if they are landing MYR and North, either at FL220 if 35 is also alerted or FL340 if it is just for 09. SCOOBs are also routed via JDUBB to help mitigate volume, when this happens aircraft landing MCO and north are often capped at FL320 to maintain the volume at 07 at an acceptable level.

# ZDC FOCUS ITEMS

- **DCA SURFACE:**
  - Limited Ground constraint
    - Limited expansion area
  - Main Runway rehabilitation Project for the next 2-3 years
    - Work scheduled April-Nov starting 2023
  - New North Terminal
    - Pushing back to Spots 4 & 5 block Taxiway N (approx. 6-8 mins), and as a result limiting the use of RWY 33
  - Change in Fleet mix
  - Complex airspace filled with numerous Special Events/VIP Movement
  - Paying attention to the ***THROUGHPUT is a must for DCA especially during SWAP***





# ZDC FOCUS ITEMS

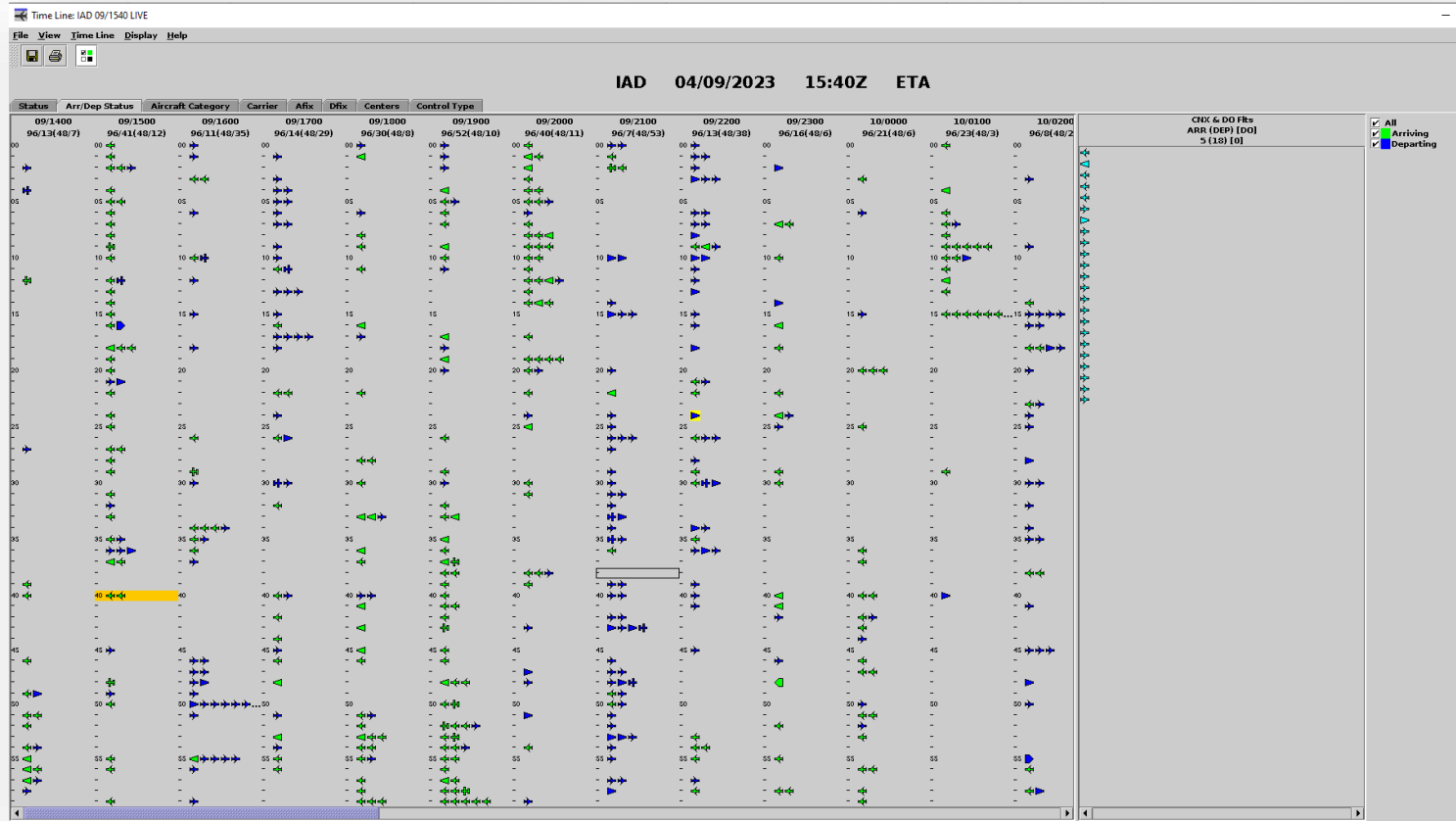
- **DCA SURFACE:**
  - Ground Delay program for DCA
    - Throughput is an issue during SWAP.
    - Arrivals get in ahead of the TSTMS. TSTMS shuts everything down ... How do we get departures out to prevent Gridlock?



# ZDC FOCUS ITEMS

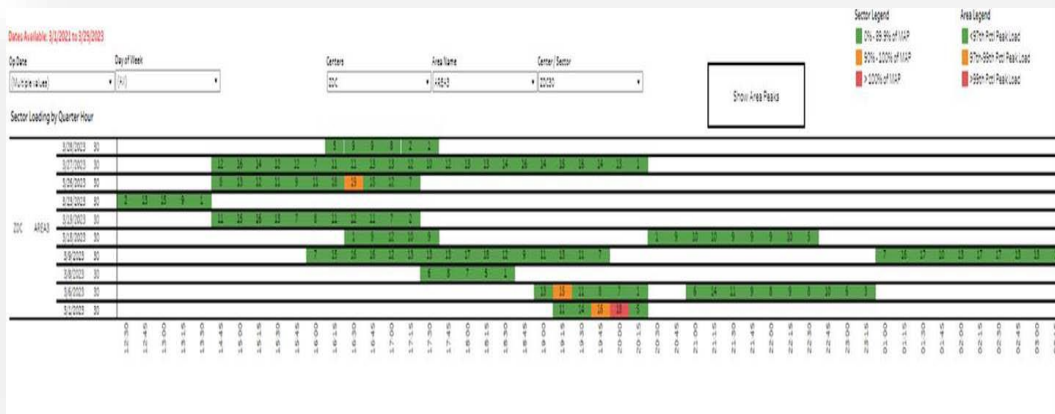
- **IAD INTERNATIONAL DEPARTURES (1700-1845L)**

- For ZDC/PCT/IAD a large concern during SWAP is not only how would the arrivals get after 1530L, but even more concerning is how do the weather constraints look as pertains to getting the International departures out. Use of Euro tunnel/GOATR play/B24



# ZDC FOCUS ITEMS

- **OBX – OUTER BANKS (ZDC30):**
  - Traffic AOA FL400
  - Increase usage/ZDC’s commitment to having the Sector opened up more



ZDC NAS Monitor (Relative Time Range)

Functions Customize Help

Display Range: 2.25 hours (Time Limit) Show only if alerted in next 2.25 hours (Time Limit) Updated: 1925

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09+	17/17	16	20	18	20	34	26	10	15											
(09)	17/17	10	12	12	14	14	20	15	8	10										
25+	13/13	9	12	13	8	7	6	7	10	7										
(30)	16/16	15	13	16	19	21	18	15	6	8										
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(42)	15/15	6	10	11	9	10	7	4	8	8										
		1915	1930	1945	2000	2015	2030	2045	2100	2115										

# ZDC FOCUS ITEMS

- **TRAJECTORY OPTION SET (TOS):**
  - *Fully deployed at ZDC and ready for use*

## ATO | 2023 Focus Five | Efficiency Initiatives

**The National Airspace System (NAS) is the safest, most efficient aerospace system in the world.**  
While safety is always our primary concern, efficiency maximizes the use of available airspace.  
The overarching goal of these performance initiatives is to increase efficiency without compromising safety and ultimately reduce delay wherever possible.



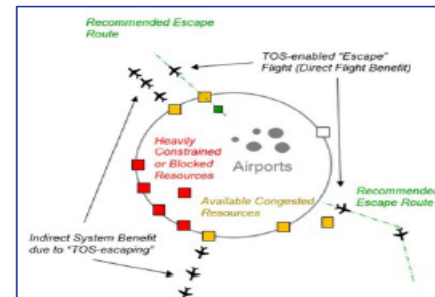
Continuously reviewing system performance to proactively identify gaps in system efficiency allows for collaborative, data-based analysis that creates effective solutions and drives actionable change.

### Trajectory Option Set (TOS)

Trajectory Option Set (TOS) will be a key component of reducing taxi-out delays and gate returns during adverse weather conditions in the years to come. TOS allows flight operators the ability to submit alternate route options, in order of preference, to enable a more flexible and dynamic solution for Traffic Flow Management (TFM) issues. This new capability will streamline the coordination and decision making process and ultimately increase efficiency/throughput in the NAS.

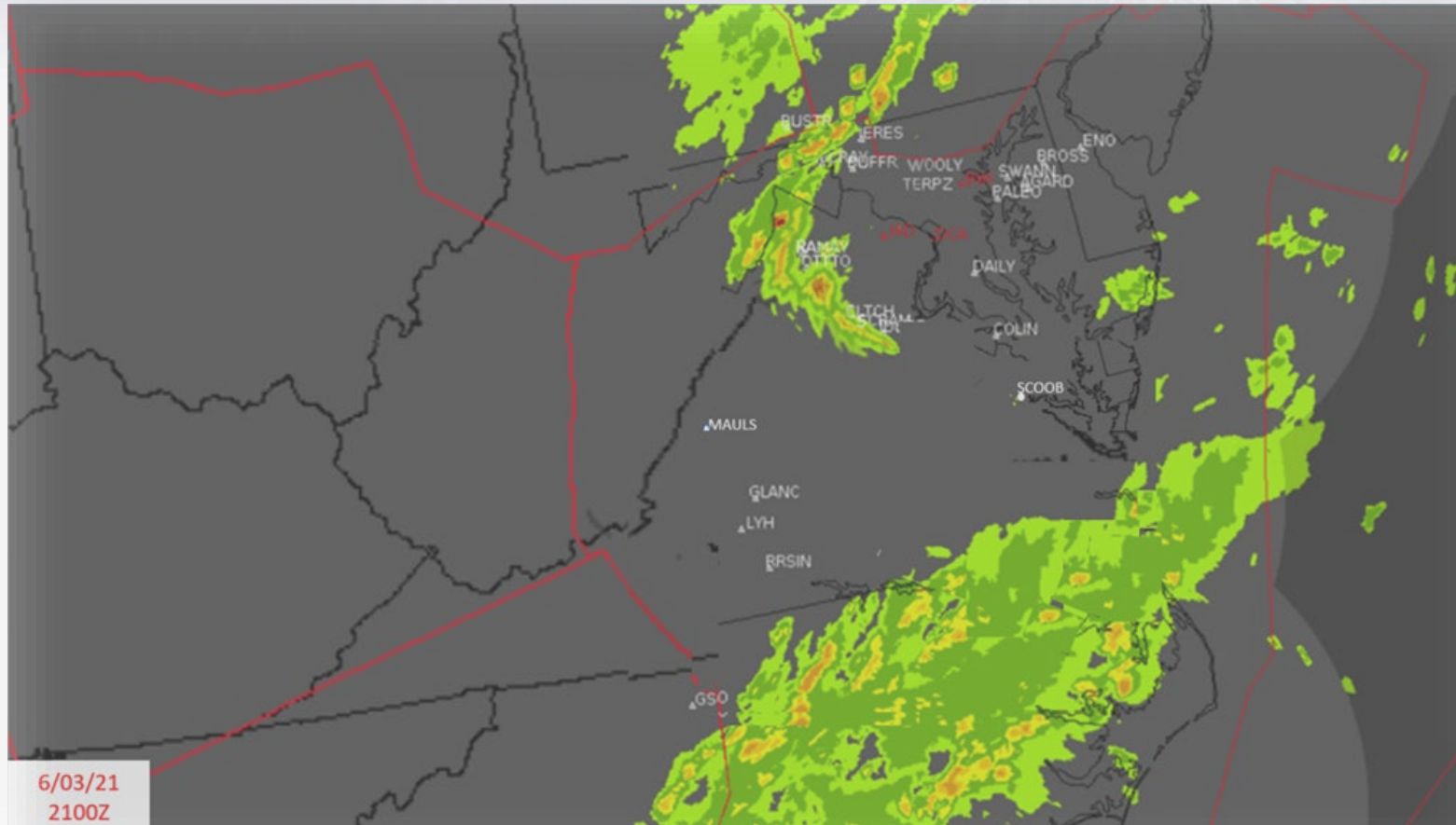
In 2022, the Collaborative Decision Making (CDM) Flow Evaluation Team (FET) conducted table top exercises at the Washington Air Route Traffic Control Center (ZDC). This effort proved fruitful as the airlines demonstrated their readiness for this new capability. This coming year, Air Traffic Services (AJT) and System Operations (AJR) will partner to fully deploy TOS capabilities at ZDC. The lessons learned and experience gained will help us further deploy TOS throughout the rest of the NAS.

Together, the ATO and industry will share in the execution of impact management strategies for tactical and strategic route planning. Success of this initiative will be predicated on the number of Industry submissions, and ATO issued Trajectory Option Sets.



# ZDC FOCUS ITEMS

- **TRAJECTORY OPTION SET (TOS):**
  - ZDC enters SWAP. The weather event below closed several West Gates



# ZDC FOCUS ITEMS

## Before TOS

### Current Operations

- Gate stops handled via PDRR for departures affected.
- Any route/CDR swap can be assigned by departure coordinator.
- Input from flight crew delayed, or results in undesirable route compromising efficiency and time.
- Effects ripple throughout the system.

The screenshot displays the 'Route Amendment' tool interface. It includes sections for 'Routes', 'Flights', and 'Show' options. The 'Current Routes' section shows a table with columns for route code, status, and route details. The 'Retrieved Routes' section shows a table with columns for route code, status, and route details. The 'Assigned Routes' section is currently empty. The 'Create Route Amendment' section includes buttons for 'Merge', 'Use Last Sent', and 'Optimize Route(s)'. The 'Filter' section includes fields for 'Route Code', 'Departure Fix', and 'Traverses'. The 'CDR Lookup' section includes a table with columns for 'Route Code', 'Departure Fix', 'Traverses', and 'Route Elements'.

Route Code	Departure Fix	Traverses	Route Elements
BWIORD00	RAMAY	ZAU ZDC ZID	KBWI TERP27 RAMAY Q72 HACKS J149 ROD WATSN4 KORD
BWIORD11	JERES	ZAU ZDC ZOB	KBWI TERP27 JERES J211 GRACE ALEE 062 WATSN WATSN4 KORD
BWIORD18	MCRAY	ZAU ZDC ZOB	KBWI TERP27 MCRAY J518 SRPEN PSKUR 062 WATSN WATSN4 KORD
BWIORD32	SCOOB	ZAU ZDC ZID ZTL	KBWI CONLE4 SCOOB COUPN ROU SHPRD DODGE 093 HEVAN BONNT VEECK5 KORD
BWIORD40	SCOOB	ZAU ZDC ZID ZJX ZTL	KBWI CONLE4 SCOOB COUPN TYI J79 HASET HINTZ Q172 YUTEE TRO VVX VOSTK Q118 HEV...
BWIORD50	CLANC	ZAU ZDC ZID ZTL	KBWI TERP27 CLANC COLZ2 Q52 IPTAY GREY JEDER Q118 HEVAN BONNT VEECK5 KORD
BWIORD55	MAULS	ZAU ZDC ZID ZTL	KBWI TERP27 MAULS Q40 ALEAN VVX VOSTK Q118 HEVAN BONNT VEECK5 KORD
BWIORD56	MAULS	ZAU ZDC ZID	KBWI TERP27 MAULS HVQ HNN FNA WATSN4 KORD
BWIORD60	OTTTO	ZAU ZDC ZID	KBWI TERP27 OTTTO Q68 HVQ J24 FLN HEVAN BONNT VEECK5 KORD
BWIORDC1	RAMAY	ZAU ZDC ZID	KBWI TERP27 RAMAY Q72 HACKS J149 ROD WATSN4 KORD
BWIORDC2	OTTTO	ZAU ZDC ZID	KBWI TERP27 OTTTO Q176 HNN FLN HEVAN BONNT VEECK5 KORD
BWIORDC3	MCRAY	ZAU ZDC ZOB	KBWI TERP27 MCRAY J518 LEPEN WEEVR 062 WATSN WATSN4 KORD
BWIORDC4	MCRAY	ZAU ZDC ZOB	KBWI TERP27 MCRAY J518 LEPEN FRONS EMMA WYNDEZ KORD
BWIORDC5	MCRAY	ZAU ZDC ZOB	KBWI TERP27 MCRAY J518 D18 FRONS 0436 EMMA WYNDEZ KORD
BWIORDC6	OTTTO	ZAU ZDC ZID	KBWI TERP27 OTTTO Q176 HNN FLN HEVAN BONNT VEECK5 KORD

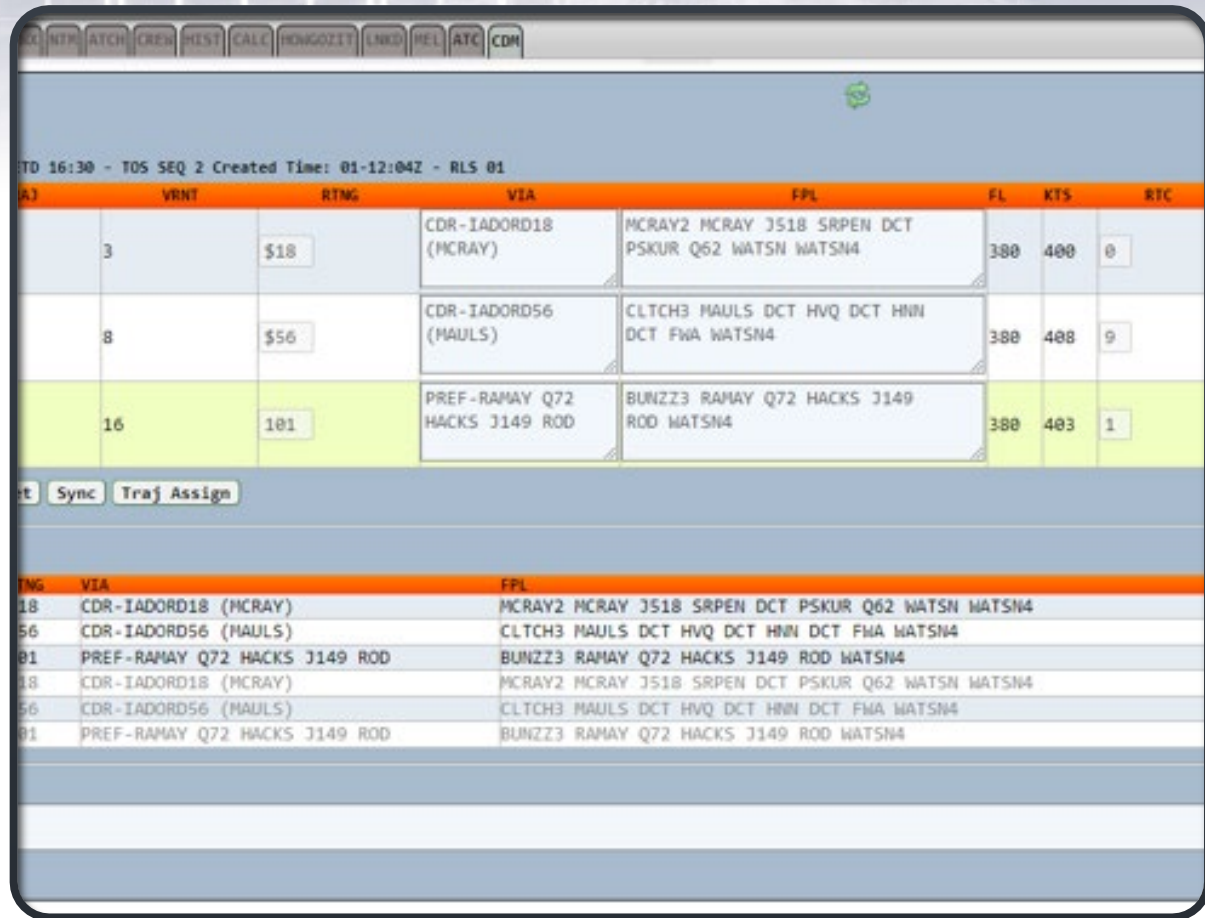
**Current PDRR Route Amendment Tool used by Departure Coordinator at ZDC. All CDR options displayed.**

# ZDC FOCUS ITEMS

## After TOS:

### *Efficiency is Maximized*

- Airlines can submit up to 5 preferred departure routes into the TOS system.
- ZDC departure coordinator selects an optimized route for the flights needs based on availability.
- No re-coordination is needed with flight crew, saving much needed time, fuel and cutting excess information.



The screenshot displays a software interface for flight route management. At the top, there are navigation tabs: 'ALL', 'MATCH', 'CREW', 'HIST', 'CALC', 'MONITOR', 'LINK', 'REL', 'ATC', and 'CDM'. Below the tabs, a status bar reads 'TD 16:30 - TOS SEQ 2 Created Time: 01-12:04Z - RLS 01'. The main data area is a table with columns: 'VRNT', 'RTNG', 'VIA', 'FPL', 'FL', 'KTS', and 'RTC'. Three rows of data are visible, with the third row highlighted in yellow. Below the table, there are buttons for 'Sync' and 'Traj Assign'. At the bottom, a summary table lists 'RTNG', 'VIA', and 'FPL' for each row.

VRNT	RTNG	VIA	FPL	FL	KTS	RTC
3	\$18	CDR-IADORD18 (MCRAY)	MCRAY2 MCRAY 3518 SRPEN DCT PSKUR Q62 WATSN WATSN4	380	400	0
8	\$56	CDR-IADORD56 (MAULS)	CLTCH3 MAULS DCT HVQ DCT HNN DCT FWA WATSN4	380	408	9
16	101	PREF-RAMAY Q72 HACKS 3149 ROD	BUNZZ3 RAMAY Q72 HACKS 3149 ROD WATSN4	380	403	1

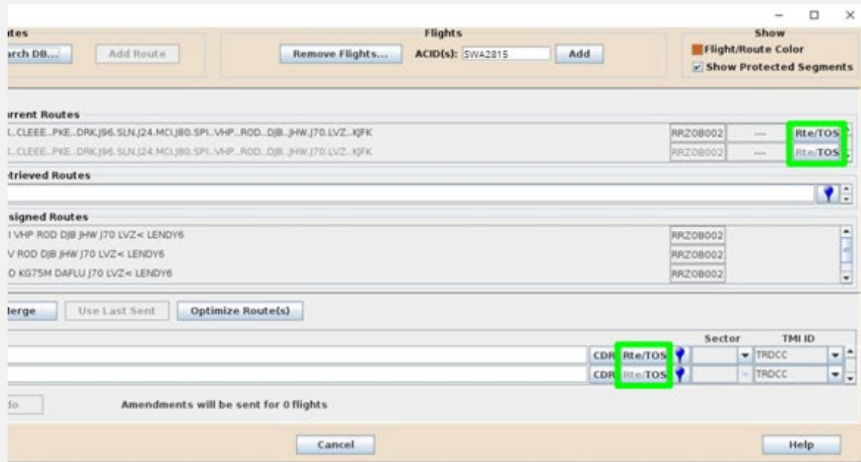
RTNG	VIA	FPL
18	CDR-IADORD18 (MCRAY)	MCRAY2 MCRAY 3518 SRPEN DCT PSKUR Q62 WATSN WATSN4
56	CDR-IADORD56 (MAULS)	CLTCH3 MAULS DCT HVQ DCT HNN DCT FWA WATSN4
01	PREF-RAMAY Q72 HACKS 3149 ROD	BUNZZ3 RAMAY Q72 HACKS 3149 ROD WATSN4
18	CDR-IADORD18 (MCRAY)	MCRAY2 MCRAY 3518 SRPEN DCT PSKUR Q62 WATSN WATSN4
56	CDR-IADORD56 (MAULS)	CLTCH3 MAULS DCT HVQ DCT HNN DCT FWA WATSN4
01	PREF-RAMAY Q72 HACKS 3149 ROD	BUNZZ3 RAMAY Q72 HACKS 3149 ROD WATSN4

*Example of TOS Input System from Stakeholder*

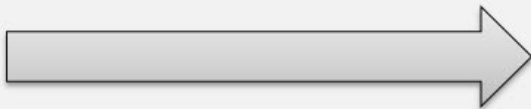
# ZDC FOCUS ITEMS

- TRAJECTORY OPTION SET (TOS):

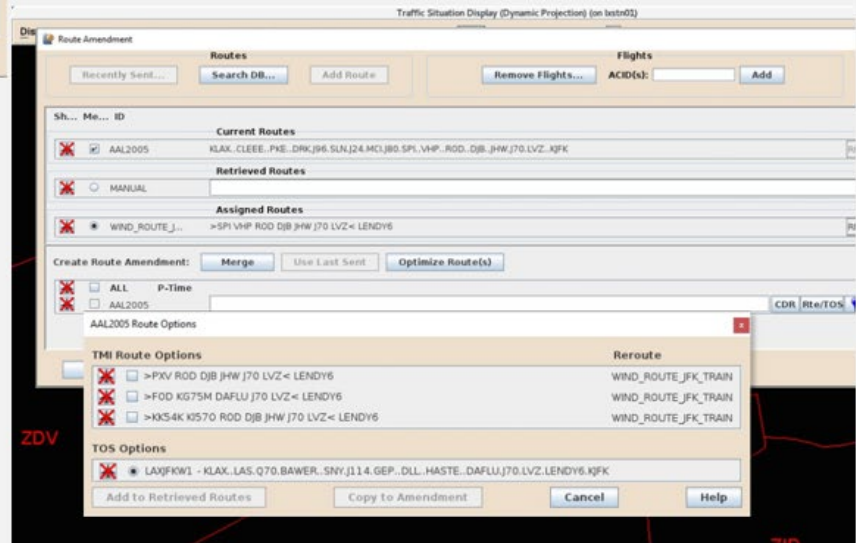
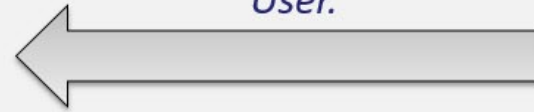
## RAD, TOS Examples



If requested route is available, route is optimized and sent to the Flight Crew via PDRR. (see TOS OPTIONS)



*TOS indicator is BOLD to alert Departure Coordinator that routes have been submitted by a User.*





# ZDC FOCUS ITEMS

- **TRAJECTORY OPTION SET (TOS):**

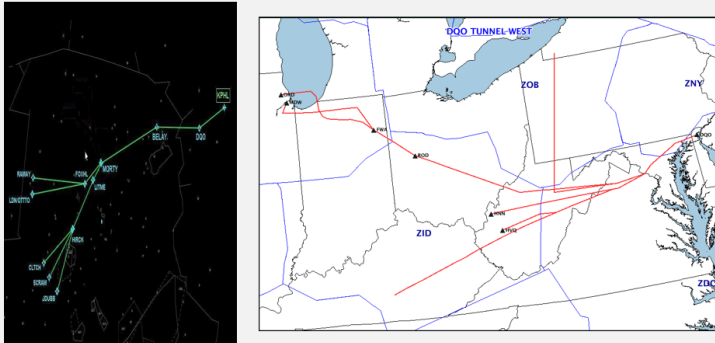
## RESULTS:

More flights are issued optimized departure routes in less time, allowing for a reduced workload during times of increased demand. This allows us to recover quickly from impacts with a minimal amount of information transfer, allowing coordinators to move onto the next task as soon as possible. NAS efficiency as a whole is increased significantly, benefitting all users affected by swap.



# ZDC ESCAPE ROUTES

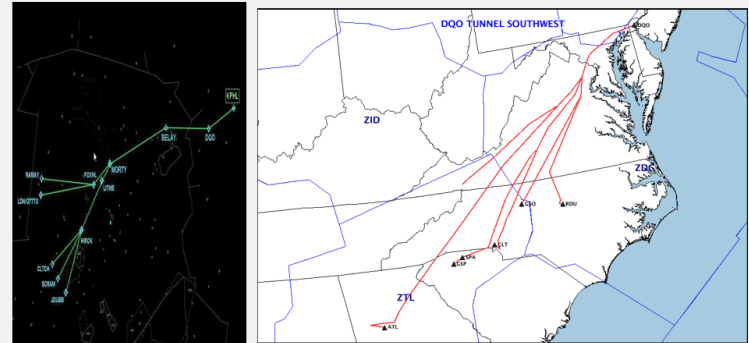
## PHL DQO TUNNEL WEST



- TMU agreement with PHL, PCT, and ZDC.
- Aircraft from PHL are sequenced with BWI TERPZ Departures. Will require mile-in-trail.
- Flight Crews must comply with Altitude Restrictions. Expect 100 until MORTY. Do not request higher than FL230 until RAMAY/OTTTO.
- CYYZ/KBUF/KROC arrivals can expect no higher than FL220.



## PHL DQO TUNNEL SOUTHWEST

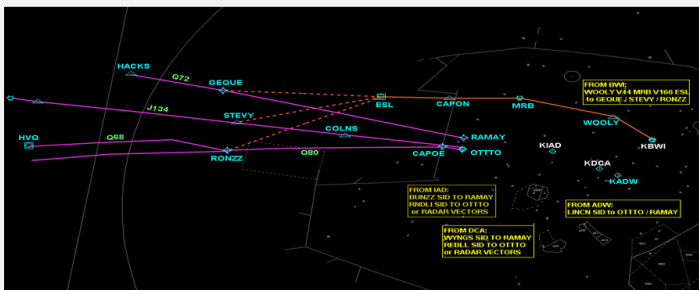


- TMU agreement with PHL, PCT, and ZDC.
- Aircraft from PHL are sequenced with BWI TERPZ Departures. Will require mile-in-trail.
- Flight Crews must comply with Altitude Restrictions. Expect 100 until MORTY. Do not request higher than FL230 until RRSIN/KERKK/WALCE.
- KRDU/KGSO arrivals can expect no higher than FL230.



## LIMBO WEST

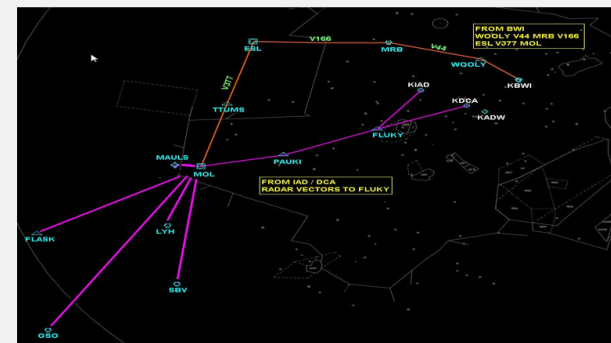
*(DC METRO ESCAPE ROUTES - Intended for traffic to destinations which normally file J134/Q68/Q72/Q80)*



ORIGIN	FILTERS	ROUTE	DEST	REMARKS
KDCA KIAD KADW		RAMAY GEQUE Q71 HACKS	UNKN	EXPECT 100 UNTIL GEQUE
OTTTO Q19 STEVY			UNKN	EXPECT 100 UNTIL STEVY
KDCA KIAD KADW		OTTTO CARBE RONZZ Q80 HWQ	UNKN	EXPECT 100 UNTIL RONZZ
KDCA KIAD KADW		OTTTO CARBE RONZZ Q80 FAREY BWG	UNKN	EXPECT 100 UNTIL RONZZ
KBWI		WOOLY V44 MRB V166 ESL GEQUE Q71 HACKS	UNKN	EXPECT 100 UNTIL ESL
KBWI		WOOLY V44 MRB V166 ESL RONZZ Q80 FAREY BWG	UNKN	EXPECT 100 UNTIL ESL
KBWI		WOOLY V44 MRB V166 ESL RONZZ Q80 HWQ	UNKN	EXPECT 100 UNTIL ESL
KBWI		WOOLY V44 MRB V166 ESL STEVY	UNKN	EXPECT 100 UNTIL ESL



## LIMBO SOUTHWEST



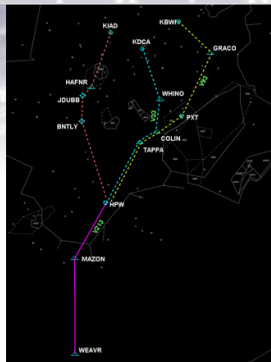
ORIGIN	FILTERS	ROUTE	DEST	REMARKS
KBWI		WOOLY V44 MRB V166 ESL V377 MOL	UNKN	EXPECT 100 UNTIL ESL. EXPECT 140 FROM TTUMS TO MOL
KDCA KIAD		FLUKY PAUKI MOL	UNKN	EXPECT 120 UNTIL MOL



# ZDC ESCAPE ROUTES

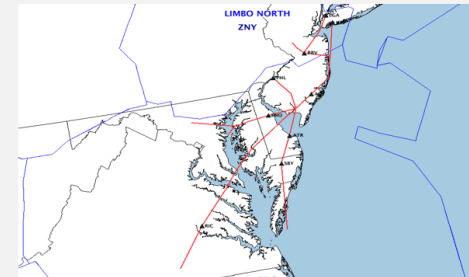
## LIMBO SOUTH

- Used when SCOOB is closed.
- HPW MAZON WEAVR TRANSITIONS TO ZDC SECTORS FOR CLIMB
- **FLIGHT CREWS MUST COMPLY WITH ALTITUDE RESTRICTIONS. DO NOT REQUEST HIGHER ALTITUDE UNTIL WEAVR.**



ORIGIN	FILTERS	ROUTE	DEST	REMARKS
KBWT		GRACO V93 PXT TAPPA HOUKY TAQLE1	KRDU	EXPECT 120
KDCA		WHINO V33 COLIN TAPPA HOUKY TAQLE1	KRDU	EXPECT 120
KIAD		HAFNR IDUBB BNTLY HOUKY TAQLE1	KRDU	EXPECT 120
KBWT		GRACO V93 PXT V213 MAZON WEAVR	UNKN	EXPECT 120 UNTIL WEAVR
KDCA		WHINO V33 COLIN V213 MAZON WEAVR	UNKN	EXPECT 120 UNTIL WEAVR
KIAD		HAFNR IDUBB BNTLY HPW MAZON WEAVR	UNKN	EXPECT 120 UNTIL WEAVR

## LIMBO NORTH (last modified 12/29/22)



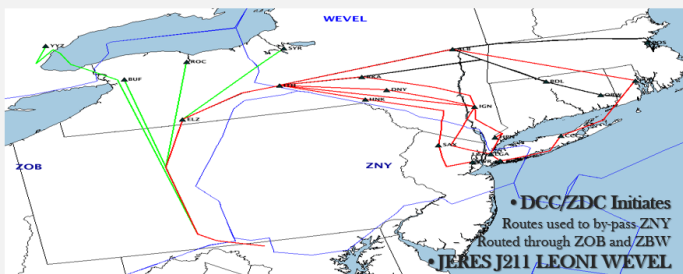
- **FLIGHT CREWS MUST COMPLY WITH ALTITUDE RESTRICTIONS: ALL AIRCRAFT = 070.**
- **ATC SHALL NOT CLEAR AIRCRAFT TO A HIGHER ALTITUDE.**
- Facilities Included: ZDC ZNY N90 PCT ACY DOV WRI

ORIGIN	FILTERS	ROUTE	REMARKS
KBWT		SWANS V18 LERAM	ALTITUDE = 070
KDCA		PALETT V18 SWANS V18 LERAM	ALTITUDE = 070
KIAD		POKEY SWANS V18 LERAM	ALTITUDE = 070
KORP		MCWIK 887 V18 LERAM	ALTITUDE = 070
EDDF		SOCKY BK COLIN WEIBK GARDE V18 LERAM	ALTITUDE = 070
KJFK		COLIN WEIBK GARDE V18 LERAM	ALTITUDE = 070

DESTINATION	ROUTE	REMARKS
KLEW KSMU KTB	LEHAR ACY V18 BANZE ZDGG V18 RBV V18 METRO	ALTITUDE = 070
KLGA	LEHAR ACY V18 BANZE ZDGG V18 RBV V18 PROCD	ALTITUDE = 070
KJFK	LEHAR ACY V18 BANZE ZDGG	ALTITUDE = 070
EDDF	LEHAR V18	ALTITUDE = 070

## ZDC WEVEL ROUTES



- **DCC/ZDC Initiates**  
Routes used to by-pass ZNY  
Routed through ZOB and ZBW
- **JERES J211 LEONI WEVEL**

ORIGIN	FILTERS	ROUTE	DEST	REMARKS
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH HNK FLOSH	KEWR	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH RKA HAARP3	KLGA	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH ALB PVD PARCH PARK18	KJFK	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH ION ION1	KJFK	ALTERNATE ROUTE: AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W MENADS DNY VALRES	KJOPN	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH PONCY FUND2	KJOSB	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH RKA SWEDE CANAN STELA1	KBDL	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH ALB WIPOR3	KPYD	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ V18W ITH	KALB	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ELZ	KSYP	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI BUJ	KBUF	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WEVEL ROC	KROC	AOB FL220
KBWT KDCA KIAD		JERES J211 LEONI WOZE LINGG1	CYZ	AOB FL220

## DC METRO NATS ESCAPE VIA GOATR (DC METRO INTL DEPTS.)

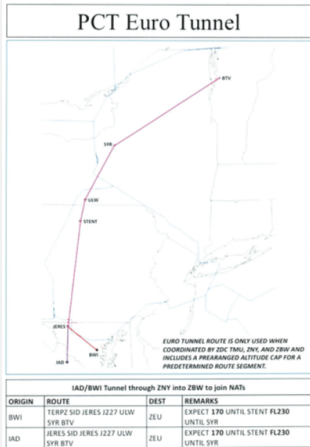


- **Command Center and ZDC Initiates**
  - Routes used to by-pass ZNY
  - Routed through ZOB and ZBW
- **MCRAY J518/Q178 LEJOY MAULL WAYLA GOATR**

ORIGIN	FILTERS	ROUTE	DEST
KIAD	FIX: TOPPS FIX EBONY FIX ALLEX	MCRAY J518 LEJOY MAULL WAYLA GOATR	ZEU
KIAD	FIX: MILLS FIX TAPFY FIX QUBIS	MCRAY J518 LEJOY MAULL WAYLA GOATR RANGY	ZEU
KBWT	FIX: TOPPS FIX EBONY FIX ALLEX	MCRAY J518 LEJOY MAULL WAYLA GOATR	ZEU
KBWT	FIX: MILLS FIX TAPFY FIX QUBIS	MCRAY J518 LEJOY MAULL WAYLA GOATR RANGY	ZEU
KADW	FIX: TOPPS FIX EBONY FIX ALLEX	MCRAY J518 LEJOY MAULL WAYLA GOATR	ZEU
KADW	FIX: MILLS FIX TAPFY FIX QUBIS	MCRAY J518 LEJOY MAULL WAYLA GOATR RANGY	ZEU

# ZDC ESCAPE ROUTES

## PCT Euro Tunnel - J220 Escape



- Command Center and ZDC/PCT Initiates
  - Routes used to by-pass SWANN/PALEO/AGARD
  - Routed through ZNY
- Commonly used for International departures



## ILG VIP TFR Routes for ZEU

**ATCSCC Advisory**

**ATCSCC ADVZV 005 DCC 04/24/2022 FCA RQD**

MESSAGE: NAME: FCAEU2:DC METROS TO ZEU  
 CONSTRAINED AREA: ZDC/ZNY  
 REASON: OTHER  
 INCLUDE TRAFFIC: KBWI/KBWI DEPARTURES TO UNKN  
 FACILITIES INCLUDED: ZBW/ZDC/ZNY  
 FLIGHT STATUS: ALL FLIGHTS  
 VALID: FCA ENTRY TIME FROM 240810 TO 242350  
 PROBABILITY OF EXTENSION: MODERATE  
 REMARKS: FCA IS FILTERED FOR FLIGHTS TO EUROPE. IMPLEMENTED DUE TO TFR. SEE DYNAMIC LIST FOR UPDATES.  
 ASSOCIATED RESTRICTIONS:  
 MODIFICATIONS:  
 ROUTES:

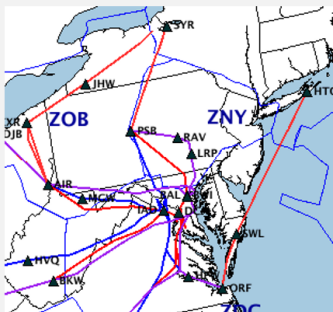
ORIG	DEST	ROUTE
KBWI(FIX: WHALE VETOL DOWEY)	UNKN	>AGARD DONEL A3GM GEDIC REFLEX
KBWI(FIX: WHALE VETOL DOWEY)	UNKN	>JERES 3220 BIGEO 349 HNK<
KBWI(FIX: WHALE VETOL DOWEY)	UNKN	>JERES 3220 BIGEO 349 HNK BOK<
KBWI(FIX: WHALE VETOL DOWEY)	UNKN	>JERES 3220 BIGEO 349 HNK CAMPO<
KBWI(FIX: WHALE VETOL DOWEY)	UNKN	>PALEO DONEL A3GM GEDIC REFLEX

THI ID: RR0CC005  
 EFFECTIVE TIME: 241010 - 242350  
 SIGNATURE: 22/04/24 00:126

- Command Center Initiates
  - Routes used to by-pass SWANN stop
  - Routed through ZNY



## DC NORTH/DC NORTH 2 (DC METRO Arrivals from CZY/ZBW)



- Command Center and ZDC Initiates
  - Routes used to by-pass ZNY
  - Routed through ZOB and ZBW

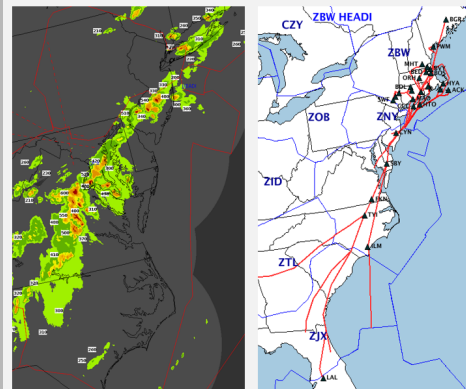
GONZZ Q29 JHW CXR AIR... (from the NW via ZOB)  
 ...AIR KEMAN ANTHM3 KBWI  
 ...AIR J34 BUCKO FRDMM5 KDCA  
 ...AIR J162 MGW GIBBZ4 KIAD

TOPRR Q167 ZIZZI... (from the East via ZDC)  
 ...ZIZZI KNUKK ATR LAFLN MIIDY2 KBWI  
 ...ZIZZI KNUKK ATR LAFLN DEALE3 KDCA  
 ...ZIZZI Q167 ZJAA Y ORF GEARS TRSSK CAVLR4 KIAD



## ZBW HEADI

(Impacted Area/Flow: TRAFFIC TO ZBW FROM THE SOUTH THROUGH ZNY)



- Command Center and ZDC Initiates
  - Routes used to by-pass ZNY
  - ZDC Internals & Overflights destined for ZBW

**ROUTE**

- Q97 HEADI
- SAGGY CHIEZ Q133 KALDA Q97 HEADI
- Q64 SAWED Q97 HEADI (from ZTL)



# ZBW FOCUS ITEMS

What Are  
We Doing  
To Make  
Summer  
2023  
Successful?



We have a focus on Training, Communications and Teamwork.

ATOSysOps



Extensive 4-Month Refresher Training For TMU



Ongoing Voluntary Advanced TMU Familiarization Training



TMU Virtual TEBW District Training



Training for underlying facilities, with a focus on SWAP and impacts of no-calls/late/early releases



Mandatory Hands-on TSD Training for OS and CIC



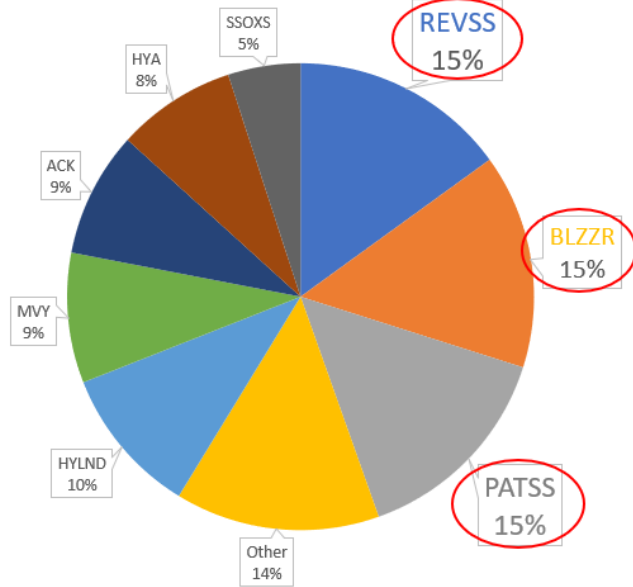
All Manager's Training for OMICs re: TMU Functions on the Mid

# ZBW TMU MIT/MINIT

## Action Plan:

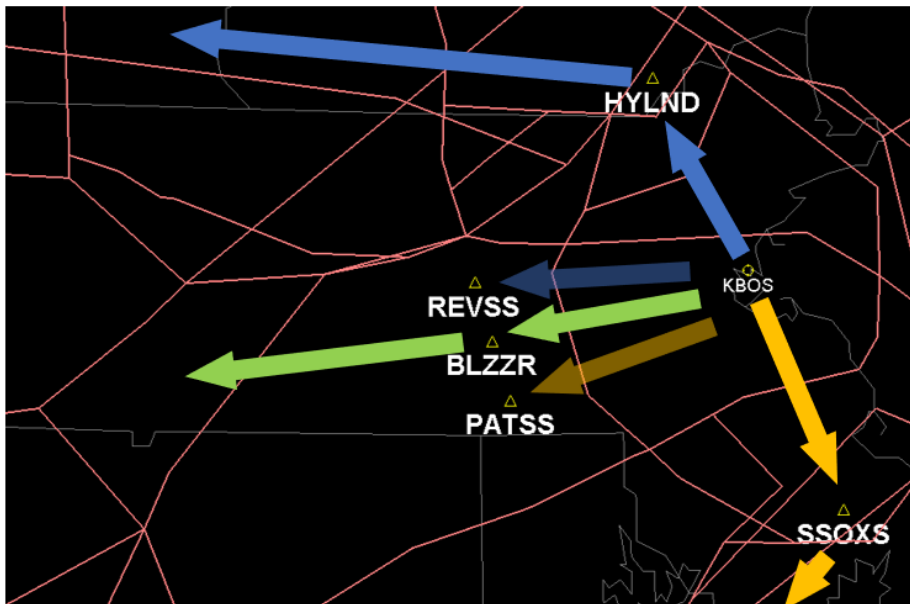
### ZBW MINIT STRINGENCY PER ELEMENT

6/1/22 through 9/15/22



- STMC created Local Tactical Reroutes (LTRs) in the TSD are available for escape plays. These LTRs behave in the Reroute Monitor like an ATCSCC Advisory.
- Using these LTRs with the PDRR/ABRR will allow TMCs to quickly make traffic flow adjustments and send them to affected positions.

- Rerouting flights to HYLND reduces delays/restrictions incurred at BOS from P/R/B restrictions.
- If utilized properly these actions could drastically change how the TMU operates and increase efficiency significantly.  
*(Note: These are local reroutes and within our jurisdiction and do not need to be coordinated with ATCSCC.)*



# ZBW TMU MIT/MINIT

## Cape Action Plan:

A blanket MINIT for ACK, HYA and MVY has been the go-to for years:

### Consider other TMIs:

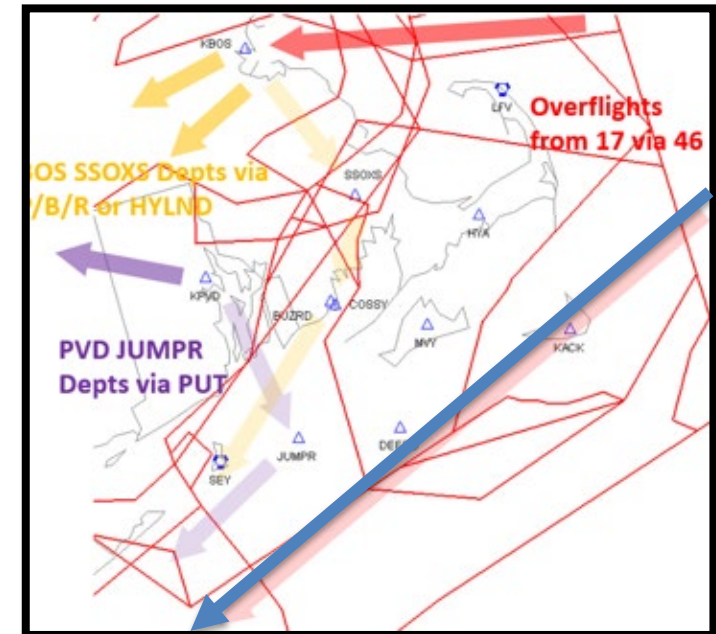
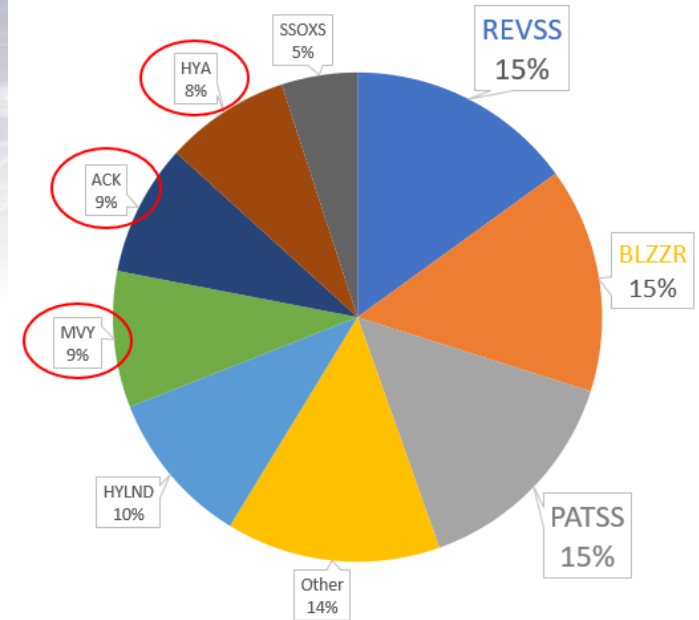
- Consider rerouting traffic around or out of Sector 18 if volume/other constraints warrant it.
- PVD JUMPR and BOS SSOXS aircraft could be tactically rerouted as necessary.
- Overflights may be routed tactically around sector 18 as necessary.

### ACK Jet Departure Heading TMI

- ZBW and A90 have collaborated to develop a TMI for ACK jet which remains within the confines of the ZBW/A90 LOA, by coordinating ACK jet departures on headings to the east. **This TMI should be entertained first before the "3/4/5" restriction.**

### ZBW MINIT STRINGENCY PER ELEMENT

6/1/22 through 9/15/22



## New York Focus Initiatives (NYFIs)



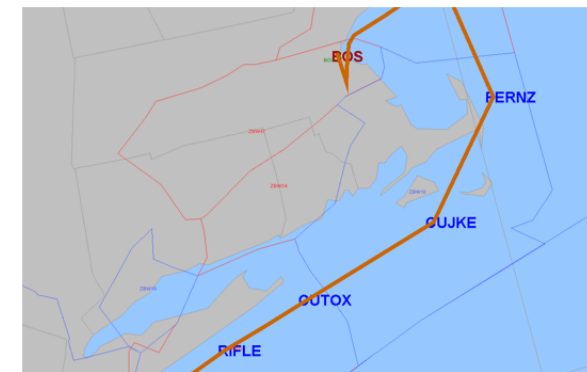
- Safety is priority #1 – NYFI does not mean NY “Free Flow.” N90/ZNY *can* have restrictions put on them
- In 2017, 40% of all departure delays throughout the NAS occurred at EWR, JFK, and LGA.
- In 2018, National Mandate driven by stakeholders and HQ to reduce delays out of NY metro area.

ZBW HAS HISTORICALLY PROVIDED SUPPORT FOR NY

UTILIZING ESCAPES EARLY SHOULD LEAVE MORE ROOM TO MANAGE INTERNATIONALS LATER

## NYFIs cont.

- **Reducing Delays from NY to BOS**
  - During a BOS GDP, accompanying MIT to BOS over PROVI due to demand can cause delays in excess of an hour out of NY when coupled with a GDP/EDCT delay
  - **Solution:** Offload N90 departures to the lower-demand OOSHNS arrival, via BETTE RIFLE OOSHNS
  - **Alternatives:** Deep water routes via OWENZ/SHIPP FLUTE ACK FERNZ OOSHNS
  - **Reminder:** ATCSCC has issued guidance stating that the NY airports should *not* be exempted from a BOS GDP unless surface constraints exist at those airports and an exemption would be to their benefit





# ZBW CAN REACH CAPACITY WITH NY TRAFFIC

## ZBW's Common Summer "Plays"

- GREKI 1, 2, 3
- CAN ROUTES- EAST&WEST
- ZOB TO N90 THROUGH ZBW
- ZBW MICAH
- ZBW HEADI
- DC NORTH 1/2
- International Playbooks
  - ZBW NATS ESCAPE VIA SYR
  - ZBW NATS ESCAPE VIA HNK
- Capping/Tunneling Plays
  - POTOMAC NORTH LOW
  - WEVEL
  - PLYER NORTH
  - SERMN EAST
  - SERBOS 1
- **More Plays Can Be Found In The Area Guidebooks or at**  
<http://www.atcsc.faa.gov/PLAYBOOK/pbindex.html>

# IN WITH THE NEW

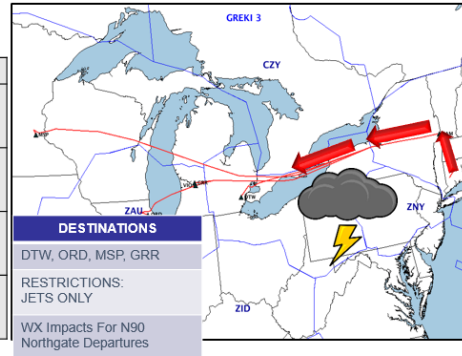
## GREKI 3

NAS Operations  
ATO SysOps

Used for CZY Constraints; Expect more usage this year

Routes Bypass CZY Entirely.

ORIGIN	ROUTE	DEST
KEWR KLGA KJFK KHPN KTEB	GREKI JUDDS CAM Q822 GONZZ DONEO TPGUN2	KDTW
KEWR KLGA KJFK KHPN KTEB	GREKI JUDDS CAM Q822 GONZZ ICHOL JAAJA BERY5 Q440 SLLAP IDIOM MUSCL3	KMSP
KEWR KLGA KJFK KHPN KTEB	GREKI JUDDS CAM Q822 GONZZ CHAAP Q436 EMMMA WYNDE2	KORD
KEWR KLGA KJFK KHPN KTEB	GREKI JUDDS CAM Q822 GONZZ CHAAP Q436 EMMMA	KGRR



Federal Aviation  
Administration

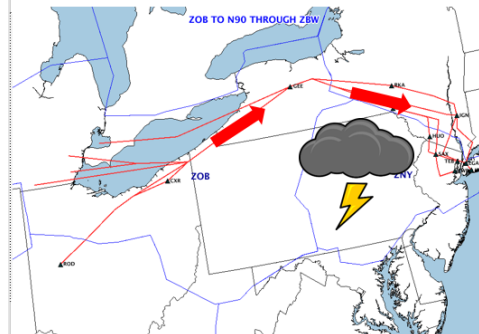
## GREKI 1 & 2 REQUIRE COORDINATIONS WITH NAVCANADA

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## BOSTON SHUFFLE WHEN CONDITIONS DICTATE

## ZOB TO N90 THROUGH ZBW

NAS Operations  
ATO SysOps



- **Impacted Area: Arrivals to N90 normally through ZNY**
- **Facilities Included: ZAU ZBW ZID ZKC ZME ZMP ZOB**
- **May see this playbook change in summer 2023 to match the "Boston Shuffle" fixes in ZOB airspace**

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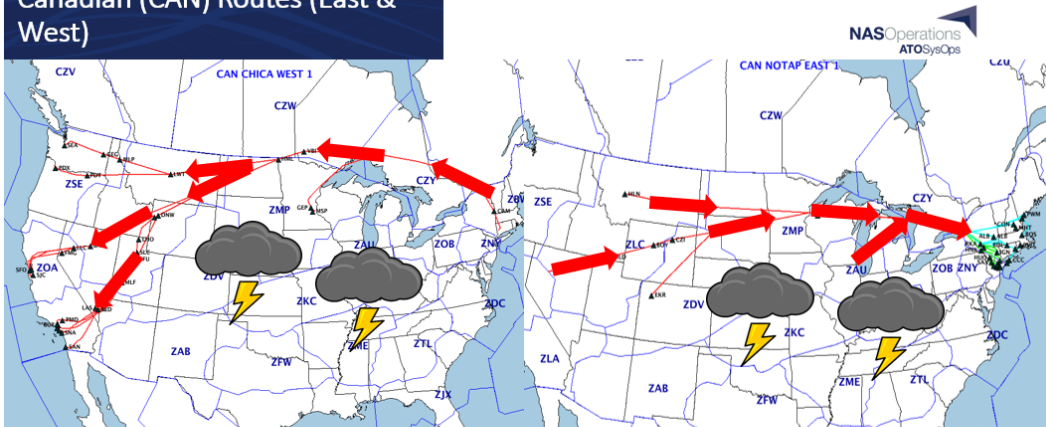
NAS Operations  
ATO SysOps



Federal Aviation  
Administration

# A FEW OLD ONES

## Canadian (CAN) Routes (East & West)

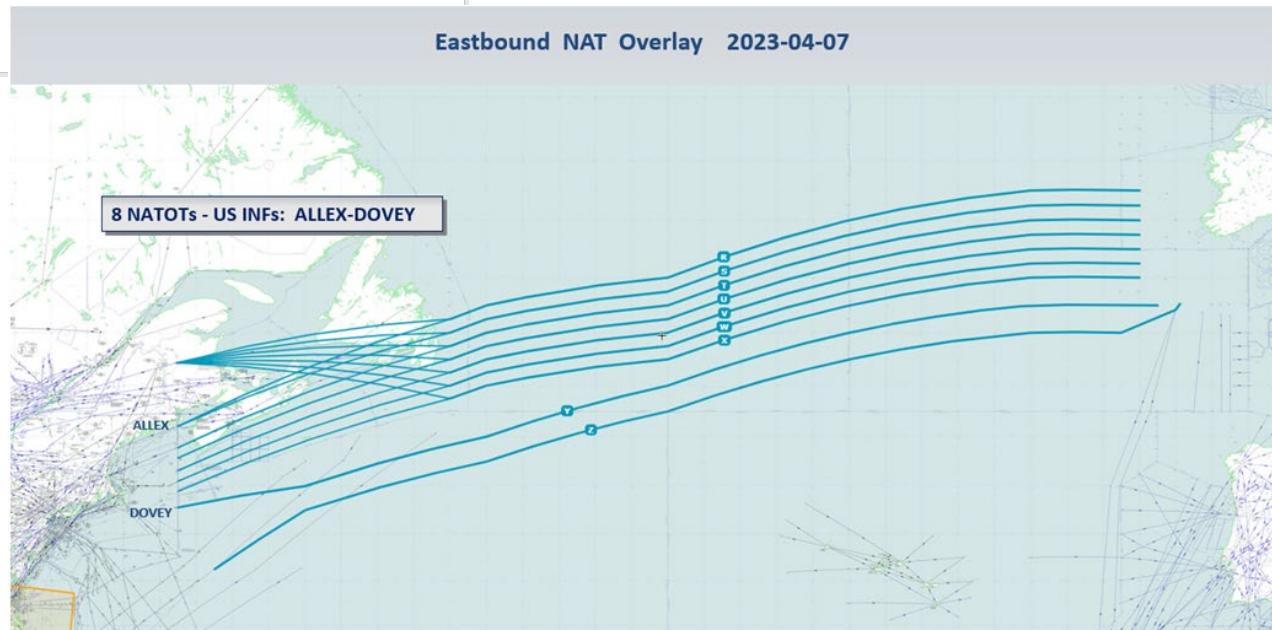


- Used when normal routing to the Midwest, Rockies, and West Coast impacted by WX.
- Flow Rerouted through Areas A, B, and E

CHALLENGES WITH AIRSPACE AVAILABILITY LIMITED AVAILABILITY IN 2022.

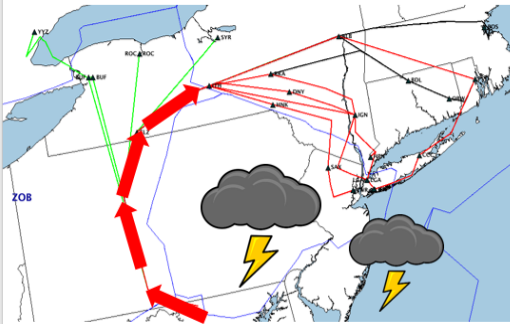
INTERNATIONAL TRAFFIC IS BACK FOR 2023

Eastbound NAT Overlay 2023-04-07



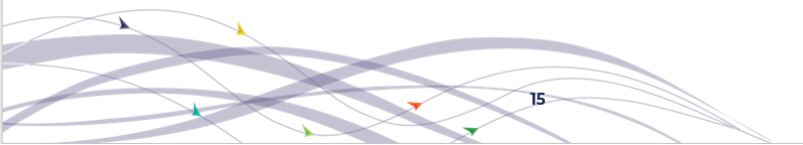
# NOT ALWAYS AVAILABLE

## WEVEL



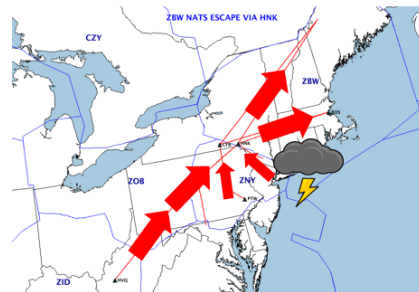
- **Impacted Area or Flow:** BWI/DCA/IAD Departures normally through ZNY and East Coast
- **Facilities Included:** ZDC ZNY ZOB ZBW
- **Restrictions:** Aircraft capped AOB FL220. Flight crews are instructed to not request higher for the entire flight

EXPECT HEAVY RESTRICTIONS AND SOME CAVEATS



Federal Aviation Administration

## ZBW NATS ESCAPE VIA HNK



- **Impacted Area or Flow:** International Departures Through ZDC or ZNY
- **Facilities Included:** ZBW ZDC ZFW ZHU ZID ZME ZOB ZNY ZTL

IN SOME CASES THESE PLAYS CONFLICT WITH EXISTING TRAFFIC



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Federal Aviation Administration

# WORK in PROGRESS

- High Altitude Exemptions
  - ZJX/ZMA & ZKC

# SWAP BRIEFINGS

## NE Facilities

- Boston Center – Apr 10 - 30
- New York TRACON – Apr 12 - 30
- New York Center - Apr 12 -30
- PHL TRACON – Apr 17 -30
- Washington Center – Apr 12 - 30
- Potomac TRACON – Apr 12 - 30