

CDM General Session / Swap 24

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Southeast Overview and Challenges

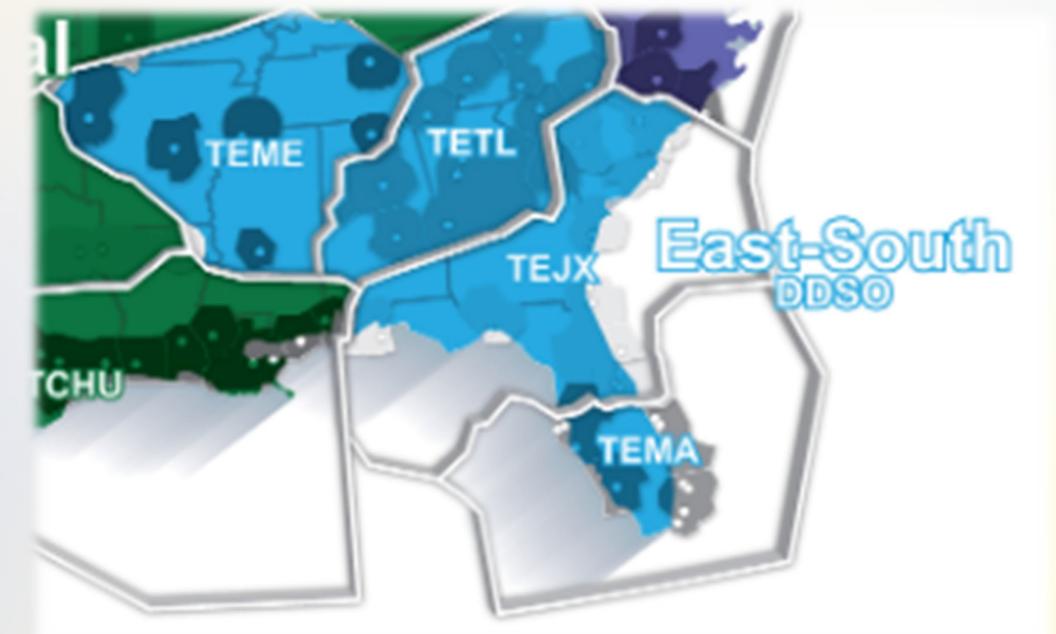
The SE US has the distinction and honor of leading the NAS in growth of Air Traffic volume in 2022, 2023, This growth has continued into 2024.

ZJX and ZMA have unique challenges that few other centers face due to:

- Their location, the funneling effect of air traffic transitioning through ZJX into ZMA
- Significant and unique convective weather activity
- Airspace constraints for military activity, and closures/reroutes associated with Launch and Reentry operations

Note: ZTL plays a critical role in the success of managing any SVRWX event due to their ability to handle high volume large scale events in a dynamic fashion and geographic location.

Note: ZJX, ZMA and ZTL's 2024 goal is improve on situational awareness and collaborative efforts when managing SVRWX events. We have had Several meetings with all three facilities and a Joint meeting with the TMOs, TMU NATCA Reps and DCC to discuss regional issues.



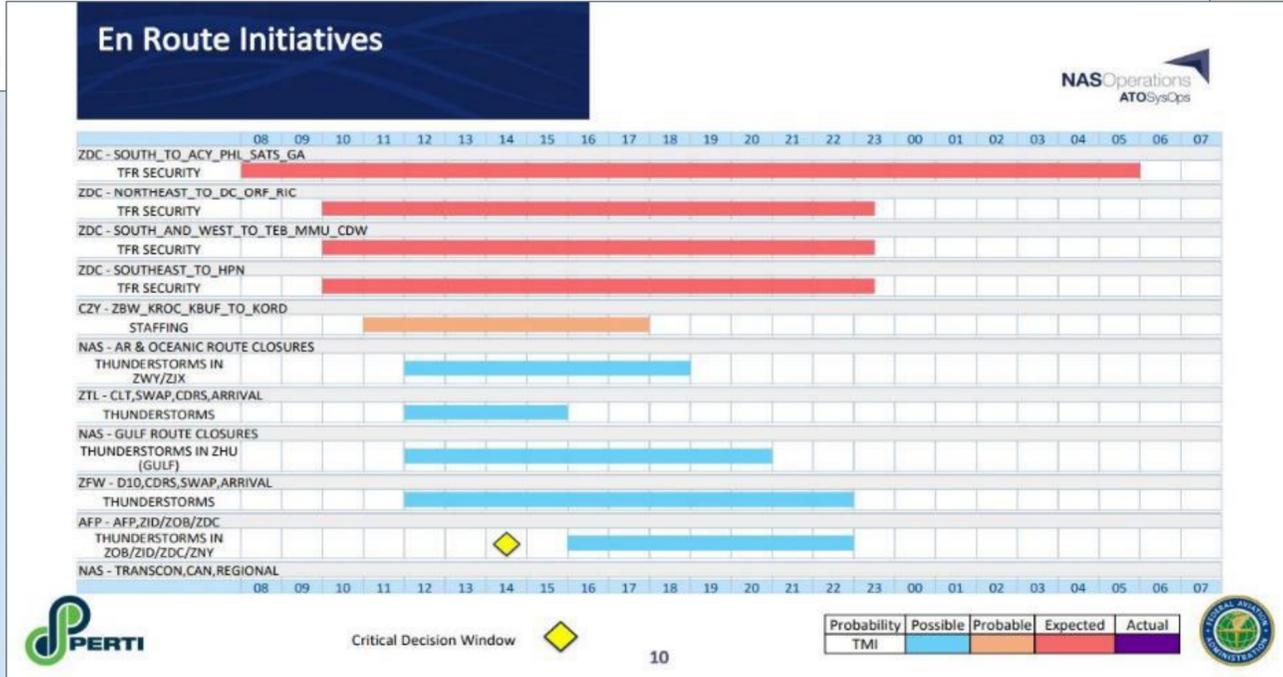
2024 Southeast SVRWX Strategies



Advanced Planning

Continuous, strategic planning for any flow constrained event results in better outcomes. The ATCSCC PERTI team assists with continuous planning for the next day operations by performing the following:

- PERTI Advanced Plan conducted daily at 2:30 EST
- Afternoon/evening update to Advanced Plan
- Midnight shift update
- Early morning Day of Operations (DoO) initial Plan
- Strategic Planning Team (SPT) DoO planning telcons



AFP Impacts

There are a few causal factors for considering and implementing an enroute AFP strategy

Once an AFP program is implemented unrecoverable delay is pushed into the system. Even if the program is purged early it takes time to recover. The tool is not meant to be a tactical.

Convective activity:

- AFPs can be an effective tool for airmass thunderstorms or stalled/slow moving frontal systems. The location of the convective activity as well as the type (air mass, line, cluster), speed, growth and the projected life cycle of the event all play into the decision-making process.

Staffing/Volume/Terminal/Complexity Constraints:

- AFPs can also be used to manage staffing issues, enroute demand to capacity imbalances, and a variety of terminal constraints. Slows volume over a large area for an extended period.

AFP Usage Challenges

AFPs are used in the Northeast for Weather only, and do not have the same usage considerations as the Florida Market.

❖ Operating AFPs in the Florida Market presents unique challenges due to the region's extensive, unpredictable weather conditions and some of the most complex airspace within the National Airspace System (NAS). Each day brings a dynamic set of obstacles, requiring adaptability and defying a one-size-fits-all solution. As traffic has increased, we are seeing less and less of a gap in volume between Snowbird and Swap seasons.

AFP usage Considerations:

- Military Airspace
- Launches
- Weather
- Volume
- Airspace Complexity
- Out of CONUS traffic
- Impact to foreign ANSPs

AFP

Weather Strategies

- What type of convective activity is the constraint (Air mass, line, backfill, stationary)?
 - What areas will be affected?
 - For SE events, Spring time frontal movement affecting ZHU24/ZJX30 and ZMA08 may require an Adhoc AFP to capture traffic that may end up flanking WX and transition through those sectors
 - determine which AFP combination would be appropriate to manage the event.
- What is life cycle (Start to End Time) of the event (i.e., forecast start/end time that high altitudes will be affected).
- Utilize step down rates and step up rates to the maximum extent possible targeting the most impactful time period for the lowest rate.
- Will the ARs be available for both north and southbound traffic?
 - If ARs are unrestricted, consider running AR AFP rate at UFT to encourage operators to route into. Same for Gulf Routes.

Note: AFP rates should be determined based on the constraint and not set to generate delay.

AFP

Weather Strategies Continued

- Will there be any airports GDPs that will be required due volume/extended TSTM activity affecting the terminal? If the GDP is imminent, implement prior to implementing AFP(s). **Note:** FSM functionality can accommodate/accept GDP(s) after the issuance of AFP(s), but if it is known a GDP is going to be implemented in conjunction AFP(s), it is a preferred practice to implement GDP first, then the AFP.
- Will there be foundational structured routes utilized that transition through the AFP (Reroutes that remove flights from a flow constrained area)? If so, **implement reroutes prior issuing AFP to avoid pop-up and re-control delays.**
- Will route-outs be available? If so, implement leading into AFP implementation.
- Evaluate potential AFP start/end time as it relates to the life cycle of the event. (i.e. demand exceeding capacity for extended periods. Examine FCA in 15-minute buckets).
- Will the AFP be implemented in a timely fashion to allow for T+45? If no, is T+30 sufficient or T+20 sufficient? etc. *Note: “From status” should only be used in extreme circumstances and as a last resort.*
- Consider implementing WATRS_RMD to route out/reduce traffic on inland routes/ARs.

Route Structure Impacts

There are a few causal factors for considering and implementing an enroute route structure strategy

Route structure is in some cases may be a more tactical option, that can be altered quickly with less impact than an AFP. This is a more tactical tool.

Convective activity:

- Route Structure can be an effective tool for stalled/slow moving frontal systems. It allows traffic flows to be stage in phases as the front moves through the affected geographic area. Considerations are giving to the location of the convective activity as well as the type (air mass, line, cluster), speed, growth and the projected life cycle of the event all play into the decision-making process.

Staffing/Volume/Terminal/Complexity Constraints:

- Route structure gives the ability to manage specific flows of traffic, making it easier implement MIT to different markets and balance out sector loading in affected facilities, while providing predictability, and allowing for resources to be allocated more effectively

SWAP Statements

ZJX/ZMA

Example: ZMA SWAP Statement:

EVENT TIME: (XX/XXXXZ – XX/XXXXZ)

CONSTRAINED FACILITIES: ZMA

THIS ADVISORY IS FOR PLANNING PURPOSES ONLY. CUSTOMERS ARE ENCOURAGED TO COMPLY WITH ALL ATCSCC ROUTE ADVISORIES.

ZMA SWAP STATEMENT:

SEVERE WEATHER AVOIDANCE PLANS ARE EXPECTED FOR ZMA AIRSPACE AND SOUTH FLORIDA_TERMINAL AREAS AFTER (XXXXZ).

PLANNED ALTERNATE DEPARTURE ROUTES:

DEPARTURE GATES ARE ANTICIPATED TO OPEN AND CLOSE BASED ON MOVEMENT OF WEATHER. EXPECT COMPACTED DEPARTURE ROUTES AND/OR SWAPS OUT ALTERNATE GATES. INCREASED DEPARTURE DELAYS AND MIT ASSOCIATED WITH SEVERE WEATHER CAN CAUSE LONGER THAN NORMAL DEPARTURE WAIT TIMES.

PLANNED ALTERNATE ARRIVAL ROUTES:

ARRIVAL GATES ARE ANTICIPATED TO OPEN AND CLOSE BASED ON MOVEMENT OF WEATHER. CUSTOMERS CAN EXPECT POSSIBLE PLAYBOOKS, TACTICAL ROUTE ADJUSTMENTS AND HOLDING ON INBOUND FLIGHTS DUE TO CONVECTIVE WEATHER IMPACTS WITHIN ZMA AIRSPACE AND MIA/FLL/TPA TERMINAL AREAS.

- ZJX and ZMA will issue SWAP statements when a SVRWX event is anticipated
- ATCSCC will relay the statement via Advisory to increase stakeholder awareness of what to expect for the event.

SWAP statements may include:

- ✓ Planned GDPs/GSs/AFPs
- ✓ Planned alternate departure Routes
- ✓ Playbook Routes
- ✓ Escape Routes
- ✓ Planned alternate arrival Routes
- ✓ Departure/Arrival Gate closures
- ✓ Airborne Holding info

ZJX Strategies

- AFPs or combinations of FEAs JX7, JX5, JG5, JG6, JX1. Rates are collaborated with command center depending on constraints. ZMA, ZDC, ZTL can be conferenced to justify program rates
- Possible capping, tunneling advisory, and MCO/TPA escape playbooks to balance altitude stratum to help increase volume efficiency
- Slowing volume on the east coast of ZJX is most important. This is where AR traffic will route out
- Route structure possibilities:
 - Ohio Valley/Midwest to Florida
- Florida to NE modified playbooks
- North East to Florida playbooks using Q75 or J48 (off east coast)
- Tactical Routes to include:
 - Moving ATL and CLT out of ZMA airspace via the west coast or shutting off east coast gates out of MCO
 - Using the segmented AFP to run an 'AT RATE' program for both the east and west sides of ZJX airspace

ZMA Strategies



- ZMA/ZJX often have mutual constraints and collaboratively work together when making strategic decisions.
- As stated in the ZJX Strategies- AFPs or combinations of FEAs JX7, JX5, JG5, JG6, JX1. Rates are collaborated with command center depending on constraints.
- ZMA, ZDC, ZTL can be conferenced to justify program rates.
- Departure MIT / Ground Stops may be utilized to control inland sector volume as Caribbean northbound AR traffic and South Florida AR departures are routed over land.
- Mitigations for the increase Mexican and Caribbean traffic are being used like MIT, and **New offload routes structure off MMUN**



What's Changed in the East-South from 2023?

- New offload routes off MMUN, giving MMUN the option to Offload M219 traffic reducing Traffic Management Initiatives being put on ZMA and ZHU
- ZMA is in development of CDR's for MIA, FLL and PBI (over 900 are published to date). A CDM tasking has been developed to get industry involvement in the implementation process. Target completion date is June 2024. with implementation date TBD.
- New AFP methodology was developed with the combined efforts of the Command Center, East-South DDSO office, ZJX, ZMA and ZTL.
- ZMA is now using IDAC to schedule into ARCs off MIA, FLL, PBI, FXE, RSW and TPA into the Gulf, AR's and Caribbean.
- ZTL and ATL have successfully tested and are using TOSS
- New Sector ZMA R89 to mitigate the volume and complexity in Sector 8
- ZMA Developed new Non-Radar procedures to mitigate having to keep Sector 62 and 63 combined during radar outages
- Worked with ZMA/ZJX and Commercial Space with Allegiants help, to allow the ROKKT transition (ATC Assigned only) into FLL and PBI to be filed during launches.
- SFB was added to the MCO escape routes
- Added CUURT Arrival on the FL. West Coast to OPF
- ZMA, ES DDSO and Command Center reworked MA5/6 for better throughput
- ZMA, ZJX and ZTL implemented ORD Extended Metering
- Bi-directional and North bound AFPS were tested but did not yield favorable results

Questions ?

