ALERT BULLETIN

AB 2021:17/7-5
9/28/2021
1825635, 1825628, 1829993

TO: FAA (AJI-1)

INFO: FAA (AVP-1, AVP-200, AFS-280, AFS-200, Director of Air Traffic Operations - WSA, CSA, ESA (North and South)), ATSAP, A4A, ASAP, ALPA, AOPA, APA, ATSG, CAPA, IATA, ICASS, IFALPA, IPA, NBAA, NTSB, RAA

FROM: Becky L. Hooey, Director
NASA Aviation Safety Reporting System

SUBJ: ARTCC Traffic Management Flow Issues

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the following:

ASRS received a report from a ZDV Center Controller expressing concern about traffic volumes and staffing issues. Reporter stated that during a recent shift he experienced sector over-saturation resulting in a potentially unsafe operation. Reporter further stated that Monitor Alert Parameters forecast this issue but management response was insufficient.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at becky.l.hooey@nasa.gov.

Aviation Safety Reporting System
P.O. Box 189 | Moffett Field, CA | 94035-0189

ACN 1825635	
DATE / TIME	
Date of Occurrence	202107
Local Time Of Day	0601 to 1200
PLACE	
Locale	ZDV.ARTCC
State	CO
AIRCRAFT / EQUIPMENT X	
ATC / Advisory - Center	ZDV
Make Model Name	Any Unknown or Unlisted Aircraft Manufacturer
Operating Under FAR Part	121
AIRCRAFT / EQUIPMENT Y	
ATC / Advisory - Center	ZDV
Make Model Name	Commercial Fixed Wing
Operating Under FAR Part	121
PERSON 1	
Function - Air Traffic Control	Enroute
ASRS Report Number	1825635
EVENTS	
Anomaly	ATC Issue - All Types
Anomaly	Conflict - Airborne Conflict
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Anomaly	Inflight Event / Encounter - Weather / Turbulence
Detector - Person	Air Traffic Control
Result - Air Traffic Control	Issued Advisory / Alert
Result - Air Traffic Control	Issued New Clearance
Result - Air Traffic Control	Provided Assistance
Result - Air Traffic Control	Separated Traffic
NARRATIVE 1	

For the east arrival push into DEN, beginning around XA:00 and lasting until sometime after XB:30, Sector 9 and Sector 16 became over-saturated and unsafe. The numbers in these sectors had been forecasted to be well over MAP (Monitor Alert Parameter) numbers for some time prior to the sectors going red. Management and TMU were alerted to the upcoming situation.

Compounding the very high volume was the complexity in the sectors. Denver Approach restricted our arrival gate to one route with 5 miles in trail. ZMP was asked by TMU to provide us 2 routes with 10 miles in trail per route. ZMP offloaded arrivals from the LAWGR arrival to the AALLE arrival to help accomplish this despite the fact that LAWGR was the only arrival we were permitted to use going into approach. Sector 9 was then tasked with rerouting all AALLE arrivals and blending them with the existing LAWGR stream. While trying to accomplish this they had a high volume of deviating overflight traffic due to weather on the southern boundary of the sector.

Sector 9 did the best they could but began to fall behind. This resulted in a Denver feed entering Sector 16 that was falling apart at the boundary of sectors 16 and 9. Sector 16 also had a volume issue that was alerted well prior to the over-saturation. Sector 16 then became overwhelmed with trying to manage the volume of traffic while also trying to reestablish the Denver arrival sequence.

The safety of the NAS was severely compromised due to a lack of planning when it was obvious early on that traffic volume was going to be well over the limits of these sectors during a highly complex time. Aircraft should have been routed around or below these sectors to alleviate unnecessary volume and complexity. Some aircraft were routed around the sectors and the answer from TMU and management about the oversaturation was "there could have been more airplanes, but we routed some around." This answer is unacceptable. More effort should have been made to make sure the volume and complexity did not get to the point where controllers were overloaded and unsafe.

In the end, multiple Denver arrivals ended up being routed to the northwest arrival gate because the controllers on Sectors 15 and 16 could not get them sequenced in. This increased workload for Sector 33 who also had his own traffic to handle. Sector 16 had to refuse hand-offs and point-outs due to saturation.

When Center is restricted by TRACON to one route for arrivals, all involved Centers need to be under the same understanding. It increases workload and complexity to change aircraft to another arrival for stream balancing for both pilots and controllers. The aircraft that were switched to the AALLE arrival in ZMP airspace were subsequently switched back to their original arrival and re-sequenced upon entering ZDV airspace.

When the TFMS alerts Management and TMCs that a sector will be well over negotiated safe MAP numbers for a session, a plan needs to be put in place. Aircraft need to be rerouted or sent to an altitude to avoid overloaded sectors. The high volume in sectors that were already being asked to handle a higher than normal complexity due to weather and sequencing or rerouting constraints became very unsafe. TMCs in conjunction with management should have made sure that the volume in those sectors never exceeded limits.

SYNOPSIS

ZDV Center Controller reported the Monitor Alert Parameter numbers for two sectors became over-saturated and unsafe.

ACN 1825628	
DATE / TIME	
Date of Occurrence	202107
Local Time Of Day	0001 to 0600
PLACE	
Locale	ZJX.ARTCC
State	FL
AIRCRAFT / EQUIPMENT X	
ATC / Advisory - Center	ZJX
Make Model Name	Any Unknown or Unlisted Aircraft Manufacturer
AIRCRAFT / EQUIPMENT Y	
ATC / Advisory - Center	ZJX
Make Model Name	Any Unknown or Unlisted Aircraft Manufacturer
PERSON 1	
Function - Air Traffic Control	Traffic Management
ASRS Report Number	1825628
EVENTS	
Anomaly	ATC Issue - All Types
Anomaly	Conflict - Airborne Conflict
Anomaly	Deviation - Track / Heading - All Types
Anomaly	Deviation / Discrepancy - Procedural - Clearance
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Anomaly	Inflight Event / Encounter - Weather / Turbulence
Detector - Person	Air Traffic Control
Result - Air Traffic Control	Issued Advisory / Alert
Result - Air Traffic Control	Issued New Clearance
Result - Air Traffic Control	Provided Assistance
Result - Air Traffic Control	Separated Traffic

NARRATIVE 1

I was working the Traffic Management position. I saw that we were going to have a couple of hours of high volume in the Center, as is normal on a day shift. I received a briefing from my fellow Traffic Management Coordinator (TMC) in which he relayed that the Central Weather Service Unit (CWSU) had informed him we could expect to lose the East Coast routings through the state of Florida by XA:00Z. The Atlantic Routes, which normally service much of our volume between the Northeast and South Florida were closed due to weather. Sealord was planning to activate all airspace to FL500 and the Joint Air Traffic Operations Command Center (JATOCC) was planning to activate W470 to FL600. This would mean we would be left with one hole through which we would be forced to route all aircraft. I called the Severe Weather line at the Air Traffic Control System Command Center (ATCSCC) and voiced my concerns and that I thought our best option would be to put an Airspace Flow Program in place to slow the volume through ZJX due to the lack of available airspace and the increased complexity caused by the weather. I was told we didn't need that because there was not enough volume. The weather built up, much as anticipated. Planes were deviating all over the sky. I received a phone call from Severe Weather wanting to put out a playbook routing for ATL landing traffic in response to my request to ZMA via the National Traffic Management Log (NTML) to route all aircraft on the HOBTT Arrival to keep them off of the east coast. I told them that at this point it was better to handle it tactically and

reiterated that if they had helped me slow the volume on the East Coast earlier, we wouldn't have to ask ZMA to reroute aircraft. This was disregarded. To my understanding, the East Area got absolutely overwhelmed and had sectors so inundated with aircraft that they were almost out of control. We also have repeated issues with ZTL either refusing to comply with requests they have accepted or flat out refusing to accept them at all and arguing with us. Lately they have begun to send retaliatory restrictions that they don't actually need in response to our requests to tuck aircraft due to tunnel procedures necessitated by severe weather.

I would recommend that the FAA and ATCSCC realize that the traffic flowing through ZJX has increased drastically and our Controllers are consistently working Level 12 traffic day in and day out. We have severe weather literally every day between May and October which shuts off routings. Most days, unless it is a holiday, military airspace is active on both sides of our airspace, making much of our airspace unusable. Many days we are unable to split sectors off or provide a radar associate or tracker to assist the controllers. Every single time we call the ATCSCC for assistance we are denied. It is a rare occasion that an Airspace Flow Program (AFP) or structured routing is actually issued to help us as we attempt to funnel over 100 aircraft per hour through holes in thunderstorms and active military airspace. We are seeing increasing reports of severe turbulence as we force aircraft full of people through small holes in between severe weather cells. Our facility has been subject to numerous Corrective Action Plans regarding severe weather events as a result of us sending them through severe weather. Controllers are expected to call depicted weather to each and every aircraft, and are reprimanded when they are unable to, however their workload is completely absurd at this point and when we try to help slow the volume to provide them with more time for additional duties beyond separating the aircraft deviating to avoid weather we are denied! Sealord calls their airspace active to FL500 early most days and keeps it active until well into the evening, as do the military squadrons who utilize the warning and restricted areas on the Gulf Coast. As a TMC I am forced to watch sectors become saturated to the point Controllers are overwhelmed after I have initiated the Traffic Management Initiative (TMIs) at my disposal to slow it. This situation in unacceptable and has to change. I have been a Controller for XX years, X of those as a TMC, and I have never seen it so bad. People are working this intense traffic 6 days a week every week, often 10 hours a day, and they are burned out. They don't have any more to give and the system is failing them as they continue to work under adverse conditions to maintain the world's safest and most efficient system that the FAA and NATCA are so proud of.

SYNOPSIS

Jacksonville Center Traffic Management Coordinator reported asking the Command Center for help and was denied. This resulted in the East Area getting overwhelmed and sectors becoming so inundated with aircraft that they were almost out of control.

ACN 1829993

DATE / TIME	
Date of Occurrence	202108
Local Time Of Day	0601 to 1200
PLACE	
Locale	MHT.Airport
State	NH
Altitude - MSL	12000
AIRCRAFT / EQUIPMENT X	
ATC / Advisory - TRACON	A90
Make Model Name	Commercial Fixed Wing
Operating Under FAR Part	121
PERSON 1	
Function - Flight Crew	Captain
Function - Flight Crew	Pilot Not Flying
ASRS Report Number	1829993
EVENTS	
Anomaly	ATC Issue - All Types
Anomaly	Deviation - Speed - All Types
Anomaly	Deviation - Track / Heading - All Types
Anomaly	Deviation / Discrepancy - Procedural - Published Material / Policy
Anomaly	Inflight Event / Encounter - Weather / Turbulence
Detector - Person	Flight Crew
Result - Air Traffic Control	Issued New Clearance

NARRATIVE 1

We had spoken with Dispatch two hours before the flight about the days weather. We agreed on a new route that would work for all parties and operation needs. The route was filed and clearance gave the route to us. In the departure climbout we got a reroute back into the weather; we looked at it and told them unable. ATC said the almighty TMU needed it. We cited our safety concern and they give us a route that was on the border line of legal, we then had no more options with the weather at hand. TMU had plenty of time to be aware of the route, and gave us the clearance. Why should we even flight plan if we are going to get thrown all these curve balls with no recourse in the air. This is a definite safety concern. TMU is too far overreaching.

SYNOPSIS

Air carrier Captain reported filing reroute to avoid weather, but TMU issued a reroute resulting in an unsafe flight into weather.