## NATCA Safety & Tech Update Week of August 28, 2017

Advanced Technologies & Oceanic Procedures (ATOP): John Lenhart (ZOA) is the Article 114 Representative for Advanced Technologies & Oceanic Procedures (ATOP). Mr. Lenhart's report is below.

Items worked:

- CAR 2016-025 (WX Deviations, not complete)
- ZAN ATOP Dual Channel Failure
- ASEP HITL Dry Run
- ATOP Contingency
- ASEPS SRM
- Oceanic Offshore and Transition Meeting with ZNY, ZMA, and ZSU

Same as last month, Car 2016-025 is still not satisfied. We are still working with AJV84 to expand on their Feb 2016 guidance in reference to WX Deviations in an Oceanic environment. I am also using the Spaced Based ADS-B program to push this issue further.

On 8/23 ZAN experienced an ATOP Dual Channel failure. This was supposed to not be able to happen but has twice at ZAN and twice at ZNY. The controllers at ZAN had to resort to working strips which has never been a satisfactory contingency. Fortunately it was a time of the evening where traffic was light. ZOA rerouted some Oceanic tracks and ZAN was able to get aircraft out of their airspace. Working with the Tech Center it was discovered that the failure was caused by a memory leak introduced in T25 (the last software drop). Situation has been remedied and has provided more push for an acceptable Oceanic short term contingency.

The ASEPS HITL Dry Run was performed the week of 8/7 at the Tech Center. John Fox from ZNY and I ran the HITL's to ensure they were ready for the ZNY controllers go to the Tech Center and run the Reduced separation HITL's the week of 9/11. The goal is to capture Controller reaction time and feasibility while using a 15 mile and 23 mile longitudinal and lateral separation standard in the Oceanic environment. For this NATCA is ensuring the HITL's are realistic and the proper briefing, training, and feedback forms are present.

We have opened discussions with the ATOC team and AJV84 in reference to a short term contingency for ATOP. Many Ideas are being discussed. The Dual Channel Failure at ZAN has provided more push to this.

ASEPS SRM was held at Indianapolis ARTCC the week of 8/21. This SRM is attached to the investment phase. A collateral benefit of the Spaced Based ADS-B SRM is we have the opportunity to revisit topics that have been difficult to pursue like WX deviations while utilizing reduced separation and contingency dynamics.

9/6 and 9/7 the Airspace Managers and Natca Reps from ZNY, ZMA, and ZSU and myself will be meeting at AJV84. The purpose of this meeting is to discuss the requirements for transitioning Oceanic traffic into the Radar environment along with the separation standards. There is some confusion within the facilities on what is allowed and what is not. Also we plan on an ATOP familiarization. We feel familiarization is necessary for two facilities to construct an effective LOA. I will mitigate the meeting for the NATCA side.

**AIR TRAFFIC REQUIREMENTS (AJV-7):** James Keith (D10) is NATCA's Article 114 Representative to the AJV-7 Office. His update for this report is below.

I attended the Mobile IFR clearance delivery research demonstration. The demo demonstrated a concept that allows pilots to receive IFR clearance from a mobile device. The demo also demonstrated the possibility of IFR release being obtained from the mobile device. The concept is in the early stages and NATCA will provide SME's to MITRE to assist in the development.

AIM seg 3- the work on this project is ongoing. The con ops and shortfall analysis is a work in progress. The concept is to digitize all paper IE: LOA's, SOP's, charts, orders and etc. The issue brought to light by NATCA is the absence of a method for controller to obtain the digitized versions of reference material for the purpose of studying and training. I will keep the membership posted moving forward.

ERAM sector enhancement- The ERAM National User Team (NUT) took on the task of prioritizing sector enhancement. A series of three meeting where held to brief the NUT on the concepts for sector enhancement and how to use the scorecards to rank score those enhancements. The NUT returned all score cards by August 17<sup>th</sup>. The score cards where summarized to provide a NATCA score to the overall process of sector enhancement prioritization. I would like to say thank you to the NUT for taking the time to complete this process.

QWERTY- we are finalizing the plan to test these keyboards.

Interval Management (IM)- The IM workgroup will continue its work in September.

Spectrum Frequency- The agency is updating an order dated 1980. The order outlines the requirements for frequency installation and back up requirements. Jon Shedden has been representing NATCA on this project.

Aircraft Types- The CAR addressing aircraft types is an ongoing process. NATCA and the agency have meet several times in August on this specific issue. The meetings have uncovered the need to finalize an order to compile a national database for aircraft types and prevent erroneous types to be used in the NAS along with robust training to the field. Other solutions are being discussed but need to be investigated further prior to releasing.

Airspace Technical Demonstration-3 (ATD-3)- I attended a briefing by NASA in Fort Worth, TX. ATD-3 brings three concepts Multi Flight Common Route (MFCR), Traffic Aware Strategic Aircrew Request (TASAR), and Dynamic Routes for Arrivals and Weather (DRAW). NASA will be giving NATCA national with an in depth briefing in October on ATD-3. I will report more after that briefing.

Offshore Precipitation Capability (OPC)- AJV-7 is waiting word from the PMO on cost. The information and a path forward should be soon coming.

**HUMAN PERFORMANCE:** Jay Barrett (MIA) is the Article 114 Representative for Human Performance. His report is below.

#### **Human Factors Activities**

F11 (TRACON Certification Standards)— We have completed training all of the OJTIs, Trainees, FLMs and SAIC instructors at F11. They currently have begun using the standards during OJT. We have had some technical issues with electronic checklists, but overall the training concepts and process has been very well received by everyone at the facility. The controllers overwhelming agree that we have needed this approach to training for a very long time. It will take a month or so to get some legitimate feedback on the difficulties implementing the process. We expect some growing pains and issues going forward, but remain very optimistic. The plan now is to do a 2nd level management briefing next week to ensure continuity across the facility and ensure that the FLMs have 2nd level support for the slight increase in their workload. One member of the HPT will be on site at F11 for the next 6 weeks or so to support the program, answer questions and inhibit any organizational drift or that may occur. We understand that an efficacy assessment is over a year or so off. N90 - We are on track to take the TRACON certification standards and begin training them at N90 in Mid October. This effort is part of the broader effort called NDIS, which Tom Adcock is heading up.

Safety Culture Assessment - The safety culture workshops were completed at TPA last week. We did 10 workshops and had about 55 controllers participate and provide us with very good information about the safety culture at TPA. We also spoke with 6 of the 11 management folks to get their prospective on the results of the survey. Essentially, we took the results from the 50 question survey that was completed a month ago and used those questions as jumping off point to engage the workforce in interactive discussion on safety, the culture of the facility, policies and procedures as well as health and wellness and OSHA issues. We believe the participants were very honest and sharing and we collected a plethora of de-identified information that will be compiled and a report will be completed in the next month or so. Once finished the report will be distributed to AJI-0 (Biggio), NATCA and TPA leadership.

## **Health & Wellness**

There hasn't been much going on here other than the background work that continues on Academy materials for AT Basics as well as the survival guide. There has been some financial pushback on when we might be able to integrate this material into the Academy curriculum.

I have been working with the national Professional Standards reps in identifying ways that we can leverage the ProStands program with PFS and the H&W element to raise the awareness of professionalism from a human performance and safety perspective. We believe we have some good ideas on how to reach the workforce a little more effectively.

#### Fatigue

ZOA - The sleep study is ongoing. We expect to receive the actigraphs back in the 2nd week of September.

Further sleep studies - I have entered into preliminary discussions with Biggio about where we undertake the next sleep study. No decisions have been made as of yet.

**NEXTGEN:** Kevin McLaughlin (SCT) is the National NextGen Representative for NATCA. His report to the membership is below.

As large portions of the transformative Programs launched by NextGen move into the Program Management Office (PMO) for implementation several key challenges remain. Among these challenges is the integration of rapidly growing space activities into the NAS. This week, I participated in the Commercial Space Integration Team (CSIT) along with Mark Prestrude, and the Joint Space Operations Group (JSpOG). Historically, the US space program has its roots in the activities of the military and NASA. In 1984, the Commercial Space Launch Act was passed creating an entirely new sector of the space industry complex overnight. Regulatory oversight for commercial space was assigned to the Office of Commercial Space Transportation (AST), which was originally an entity in the DOT and is now a separate line of business within the FAA. The mission of AST is to encourage, facilitate, and promote U.S. commercial space transportation while protecting public property, and the national security and foreign policy interests of the United States. Commercial space launch and reentry operations are increasing in frequency and additional launch sites have continued to be added. This has required AST to re-examine the manner in which increasing operations can be safely and efficiently conducted without overly impacting the NAS.

Air traffic has traditionally operated on a first-come first-served principle of service, while operations that required segregation from the other NAS activities were evaluated on a case-by-case basis. The FAA has publicly stated the following as its Vision for integration:

"Uphold the required level of public safety and minimize the effect of space operations on the overall efficiency and capacity of the NAS without jeopardizing the space vehicle operator's opportunity for mission success."

The Agency has deployed multiple strategies for achieving this objective including: minimizing the activity time window, restricting activity windows to non-peak times, design of Defined Aircraft Hazard Areas (AHA), obtaining adjacent SUA airspace for ATO use, the use of historical traffic data to assess launch impact, and implementing real-time coordination and launch modeling. As these enabling technologies are further evolved, additional tactical options will become more broadly available and additional decision support tools must be made available to ATC for display on the controller's glass. Much of the existing work is currently accomplished manually, borrowing on existing tools not designed for this purpose. However, the FAA has been prototyping technologies such as the Space Data Integrator (SDI) that was field-tested this year at Miami Center for space vehicle tracking. Once incorporated into ERAM and deployed around 2020, SDI will permit controllers to see space vehicle trajectory depicted on their display. These types of technologies combined with increased vendor vehicle reliability will permit the transition from space vehicle segregation to operational integration.

**OSHA:** Mike Odryna (ZBW) is the Chairman of NATCA's OSHA Committee. He has provided an update for the membership.

## <u>3900.19C</u>

Following the INI briefing help in May on the new Draft revision to Order 3900.19. NATCA is coordinating with the Agency to develop collaborative groups to develop OSH Programs for all LOBs and Staff Offices. POC: (Dominic Petrelli, Mike Odryna, Ryan Smith, Dean Iacopelli, Phil Barbarello, Grant Mulkey)

## **3900.XX Air Fall Protection Program**

NATCA received an INI briefing on the new Aircraft Certification Service (AIR) Fall Protection Program on August 24<sup>th</sup>. We are formulating our response to the FAA requesting changes.

POC: (Mike Odryna, Scott Odle, Dominic Petrelli, Mike Collins) **3900.XX Air A<u>AIS, 3900.XX Air BBP</u>** 

Last month NATCA received an INI briefing on a proposed new order. FAA Order 3900.XX AIR AAIS, "Aircraft Certification Service Aircraft Accident Investigation Safety Program and FAA Order 3900.XX AIRBBP Aircraft Certification Service Blood borne Pathogens Program. We found numerous issue and concerns with the proposed Order and are working with the Agency to address our issues.

POC: (Mike Odryna, Scott Odle, Dominic Petrelli, Mike Collins) New Orleans Lakefront Tower Mold Issues The remediation of the Mold has completed. The build back began on August 2nd.

POC: (Mike Odryna, Geoff Bacci, Lawrence Pharr, Deb Stewart)

# OSH issue reporting

If you have an OSH issue at your facility, use your normal reporting process. I.e. OCC, UCR etc. Also, contact you NATCA Regional OSHA rep. The regional OSH Rep's work as liaisons between the lines of business.

If you have a concern about something occurring at your facility, you can fill out the following form to request a member of the OSHA Committee contact you to discuss your concerns.

OSHA Committee Information Request Form

## **OSHA Committee Webinar:**

The OSHA Committee will be holding another in a string of webinars on August 31 1pm Eastern. The newest webinar will be regarding the importance of attending Pre-Construction Meetings and how they relate to Contingency plans.

To Register click on this link: Webinar Registration

POC: (Mike Odryna, Geoff Bacci)

# Committee Membership:

We still have a vacancy Great Lakes Region.

POC: (Mike Odryna)

## PHL ATCT Housekeeping Issues

The Agency along with NATCA are continuing to work towards a strategy to ensure the cleaning requirements set forth in the janitorial contract and TechOps requirements for equipment cleaning are adhered to.

POC: (CJ Jacques)

# New OSHA 6008 training

The Agency sent out an email stating that the new OSHA6008 course is a direct replacement to the OSHA6000 requirement for OSHECCOM Members. The National OSHECCOM has not agreed to this, nor have we had an opportunity to review it. At this time, neither NATCA nor the National OSHECCOM have agreed to this change.

POC: (Mike Odryna, Dominic Petrelli)

# **Regional OSHECCOMs**

The NATCA Air Traffic Regional Reps and Region X reps attended their respective Regional OSHECCOM meetings throughout June and July and August in the Great Lakes, Southwest, Central, Northwest Mountain, New England and Eastern Regions. Minutes from the Regional OSHECCOM meetings can be found at:

OSHECCOM KSN Site

NATCA Rep. OSHA Training

Mike Odryna met with the agency to update NATCA Rep training requirements and offerings. While the current training list is still valid, an updated list of training available for all NATCA OSH Reps will be available ASAP

POC: (Mike Odryna, Dominic Petrelli)

## PCT Housekeeping Issues

The Agency along with NATCA have started to develop a strategy to ensure the cleaning requirements set forth in the janitorial contract and TechOps requirements for equipment cleaning are adhered to.

POC: (CJ Jacques)

## ZDC ATC Zero

Monday night July 10<sup>th</sup> Washington ARTCC was evacuated due to toxic fumes from a roofing project infiltrating the control room. The facility remained in ATC Zero status for 2.5 hours. Once the Fire Department gave the all clear, ATC Zero was cancelled. This event combined with the same general occurrence at Memphis ARTCC 6 months ago have raised flags as to how and when the decision to evacuate was made.

POC: (CJ Jacques, Mike Odryna)

## Public Access Defribulator Program

On May 1<sup>st,</sup> a new PAD Program subcontractor was contracted to replace Emergency University. Contractor, Website and Training info will be coming out shortly.

POC: (Mike Odryna)

<u>Current Facility issues being worked by the committee and others.</u>	
FAY: Fumes	NEW: IAQ Mold Build back
IWA: Asbestos issues resulting	YNG: Roof Replacement
from flooding of the facility	
FAI ATCT: HVAC-ROOF	ARR: Overall Facility Condition
Replacement	
GRR: Odor, ASR Contamination	PHF: Mold/IAQ
NWM Regional Office: Water	New NWM Regional Office
Quality Issues: New Regional	Design
Office Build	
DAL ATC: Water intrusion and	SGF Mold/IAQ
Mold	
HSV: IAQ, Fumes	ZAN: Seismic Upgrade
DSM SSC Office: Comprehensive	FSM: Water Intrusion, IAQ
Mold Evaluation	-
NWM Regional Office: Water	SGF ATCT: HVAC Project

# <u>Current Facility issues being worked by the committee and others.</u>

Testing	
GTF: Mold	ZME: Odor in Control room
Mansfield Tower: Water, Security, FLS	Nome: Asbestos in the floor tile Mastic, REHAB
CRP: IAQ, Exterior Door Broken, SFAS Out of service	PTK: Mold Remediation
DTW: IAQ Investigation	Tallahassee: Water Leaks
JNU: REHAB Issues	Wilmington: Doors Broken
ABE: Overall House Keeping	PHL: Overall House Keeping, Rodents
BTV: Post Remediation Rebuild	BGR: Ongoing remediation Efforts
SIT: Drinking Water	BRW: Ongoing REHAB, Mold, Open Walls, Broken Walkway
DLG: Living Quarters REHAB	KTN: Facility REHAB
PIA: Water Mold	Minneapolis TRACON: OSHA Inspection
LAS: Drinking Water Issues	BTV: Drinking Water Issues
AUS: Sewage Issues	OMA: water intrusion, mold, window replacement
GSO: Water Intrusion	LEB: Water Quality
LGA: Siding	LAX: Mold & Water intrusion Issues
MDT: Water Leaks/ Slip Trips and Fall	PIT: Water Intrusion
DSM: Cab Roof Water Intrusion	OMA: Windows and Water intrusion
KET FSS: Facility REHAB	LIT: Mold Remediation
DWH: Failed Water Test	ADS: Failed Water Test

**OPERATIONAL PLANNING AND SCHEDULING (OPAS):** Rich Santa (ZDC) leads the NATCA effort for web-based scheduling and other operational programs. His update is below.

## ATOMS

Atoms is still on hold pending the OPAS workgroup making decisions on the direction of both programs. CRU We are finding major discrepancies in the recording of CIC payments and we are looking into a resolution.

WMT

Web schedules are still on limited update cycles but we can still install in a facility if it's requested locally.

**Professional Standards:** Andy Marosvari (BOI) is the Chairman for NATCA National Professional Standards. Garth Koleszar (ZLA) and Josh Cooper (SCT) are members of the National Professional Standards committee. Their report is below.

The Professional Standards program is in its 7<sup>th</sup> year and continues to have a positive impact on the professionalism of controllers nationwide. To date, the National Workgroup has trained nearly 850 members to serve as committee members representing every facility in the National Airspace System. Committee members receive training on communication skills and conflict resolution during a 3-day course taught by NATCA. The most recent class was held in Boise in May, with 28 new committee members attending. The last class of FY17 will be held in Minneapolis August 22-24 with more classes planned for FY18.

To date, the Professional Standards program has received 2,375 submissions with 90% of those being resolved. That's 2136 issues that NATCA was able to resolve the issue at the lowest level, peer to peer, without management involvement in the outcome. Approximately 70% of those cases are submitted by management, demonstrating the FAA's belief that the peer-to-peer method used by the program is working. The recidivism rate is very low, indicating that the one on one discussions between committee members and controllers has a long-lasting, positive effect on the safety of the system and the professionalism of our controllers.

If you have any questions about the Professional Standards Program, please don't hesitate to contact any of the NATCA National Professional Standards committee members at <u>ps@natca.net</u>.

**RUNWAY SAFETY:** Bridget Gee (DFW) is NATCA's Runway Safety Action Team (RSAT) Representative. She also serves as the Article 114 Representative to the Runway Status Lights (RWSL) Program. Below is her report to the membership.

# Runway Status Lights (RWSL):

ORD: Being conducted in three phases: Phase 1, Runway 10L/28R, was turned online April 27, 2016. Phase 2 and 3 are scheduled to come online 2017.

Phase 1 (10L/28R): ORD achieved 4/10/17.

Phase 2 (10C Enhancement) – 10C target operational date Nov 2017. Shelter installation scheduled to begin June 2017 with an installation complete date of 8/31/2017.

Phase 3 (9R Enhancement) – 9R construction estimated to be completed Spring 2018 and IOC Fall 2018.

DTW: ORD declared 4/20/16.

Phase 2 (21L): Cable installation (2 Circuits) begins June 2017. Pre-Construction meeting to take place in July, Fixture/Cable installation in August, Optimization and Shadow Operations to take place in October. Activation/JAI in November.

BWI: IOC took place on 3/8/17. JAI inspection was help on 6/21/17. SFO: JAI (Joint Acceptance Initiative) took place on August 17.

BOS: Shelter delivery TBD. Some construction activities had to be shifted due to inability to excavate without Fish and Wildlife. Work on going.

DFW: Construction in process and on schedule. Shelter scheduled to be completed late August. Utility work began the week of August 7<sup>th</sup>.

San Diego: Pre-construction meeting held on August 10<sup>th</sup>.

#### **Runway Safety:**

Closed Runway Occupancy Prevention Device (CROPD): Live Testing at JFK was completed last year. The FY17 focus site is RNO. The **Live Testing began July 11** and extended thru to Aug 14, 2017. So far the testing appeared to go well. It appears that there were 3 false alerts. I am waiting on a preliminary report. There is an analysis process on the data after the testing is completed to verify the speech recognition preformed as designed that is being conducted now. More information to follow.

Airport Construction Advisory Council (ACAC): The ACAC continues to support construction activities throughout the NAS and Internationally. We brief weekly on current projects in the NAS. Automation of Construction Notice Diagrams: The original SRM met once again to go over the changes that were made from the original SRM. The documents are still in Draft form. I sat as an observer on this panel.

Runway Incursion Prevention Shortfall Analysis (RIPSA)- Research was conducted at 15 airports without any surface surveillance system. A final site selection is yet to be completed.

We are looking at 6 airports now SAT, TUS, ADS, FFZ, DAL, and DAB. The idea is to pick the top 3, which would provide the best site for the technologies, traffic mix, traffic count, and upcoming construction.

Here is the updated RIPSA timeline, which includes detailed activities:

- FY15: Technology evaluations from market survey responses completed
- FY16: Site assessments at 13 candidate airports completed

• FY17: Program Plan development / Candidate Site(s) & Technology(s) Selection

• Re-visiting viable technologies identified in FY15 assessments. This will lead to a down select of technology(s) that can be procured in the next 12 months.

• Engaging with local Regional Runway Safety Area Managers/RIM POC's to ensure potential technology solution(s) complement operations and planned construction activities

• Conduct detailed Site survey at short listed candidate airports to gauge infrastructure needs for selected technology solution(s)

- FY18: IGCE and Technology Solicitation & Procurement
- Match technology solution and sites based on operational needs and available infrastructure
- Procure technology solution from vendor
- Obtain MOU with Airport at test airport, Conduct SRM Panel for proposed technology solution
- FY19: Technology installation at candidate airport(s)
- FY20: Operational test and evaluation
- FY21: AMS Documentation / Technology Transfer

ICAO – ADOP (Aerodrome Design and Operations Panel) – My final report was submitted to IFATCA and NATCA on 12/12. Work is ongoing with the ADOP. The next meeting is scheduled for July 3-7, 2017. A full report will be completed once the official meeting minutes is distributed.

ICAO - AOWG (Aerodrome Operations Working Group) - The AOWG is responsible for the development of SARP's and the PANS procedures pertaining to emergency response at and in the vicinity of aerodromes. Work is ongoing. ICAO - Runway Safety Action Plan Working Group – This group is reviewing Runway Safety Programme achievements, objectives and priorities, and develop a Runway Safety Action Plan for the future. The working group is split into three sub-groups all of which IFATCA/NATCA is presented by Bridget Gee on:

- Data Review Sub-Group
- Hazard Identification and Risk Assessment Sub-Group
- Runway Safety Action Plan Sub-Group

The Runway Safety Action Plan Working Group is in the process of reviewing runway related accident reporting data, reviewing applicability of runway related accident sub-categories – scope of Runway Safety, reviewing Runway Safety indicators and metrics, and identifying Runway Safety data breakdown required for analysis and to be available on iSTARS.

The Working Group is also doing a safety risk assessment of Runway Safety category and sub-categories, will confirm Runway Safety risk priority, and identify mitigation measures

The Action Plan will be presented at the 2017 Global Runway Safety Symposium in Lima in November for endorsement. The purpose of the Action Plan is to strengthen runway safety initiatives at a global level.

The Runway Safety Action Plan Working Group will make recommendations to the GASP Study Group to assist the development of the 2020-2022 editions as well as develop new Runway Safety Action Plan.

**WEATHER:** Matt Tucker (ZTL) is NATCA's Article 114 Representative for Weather. His update for the membership is below.

Collaborative Decision Making – Weather Evaluation Team (CDM-WET)

The WET met at the Aviation Weather Center during the summer weather experiment in Kansas City. The team discussed validation of the TFM Convective Forecast (TCF), which replaced the Collaborative Convective Forecast Product (CCFP). The TCF is published every two hours and forecasts out to 8 hours on a rolling two-hour cycle. The Weather Service is conducting the evaluation of the TCF to measure the accuracy of the forecast based on radar replays. The summer weather experiment had three forecast desks that had specific focus on weather issues in the NAS. One was focusing on Ceiling and Visibility forecasts as it relates the impact on air traffic airport operations using extended models to when airport arrival rates would increase due to C/V changes. Another desk focused SFO and the marine layer that impacts the arrivals into SFO; the desk was using a number of different models including one from UK MET in England. The last desk was looking at how to extend the current TCF into the next day planning cycle and extend from 8 hours to 24 hours and beyond. The goal was to see if the current TCF process could be applied the extended forecast. Results of the summer experiment will be available in September.

Common Support Services – Weather (CSS-WX)/ NEXTGEN Weather Processor (NWP)

The CSS-WX program conducted an SRMP over two days and came up with 5 hazards for the system. The hazards addressed were the RADAR mosaic on ERAM, ATOP, and MEARTS. Windshear/Microburst alerts to the Ribbon displays in the control tower, and the last was model data being used in the decision support tools such as TBFM, and EDST. Site surveys were conducted at the key sites for both CSS-WX and NWP were conducted for ZTL, ZLC, A80, ATL, PDK, SLC, ZOA, and NCT. The key site installations will be in July 2018 for CSS-WX and July 2019 for NWP. Full deployment of both systems is scheduled to be completed the end of 2021. A training TIM was conducted over two days focusing on most the documents and schedule for development of training for both AT and Tech OPS. The current idea for AT training will be an ELMS course for buttonology and a Cadre training to teach scenario based operational use of weather products.