THOR'S NOTAM

United States Air Force
Weather Airman's Magazine

Volume 13: Fall 2024

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COVER PHOTO CREDIT:

Lt Col Matthias Radochla, HQ USAF/A3W

German Exchange Officer

Views of the aurora borealis from the

Shenandoah National Park, VA, October 2024

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af.a3wt.af-a3wt-weather.force.management@us.af.mil

2024 AWARDS

2024 Annual Weather Awards

CATEGORY	WINNER	UNIT	LOCATION
Airman	SrA Anthony Harsh	47 OSS/OSW (AETC)	Laughlin AFB, TX
NCO	SSgt Michael Garcia	96 WS/WXA (AFMC)	Eglin AFB, FL
SNCO	MSgt Jeffrey Hunter	90 OSS/OSW (AFGSC)	F.E. Warren AFB, WY
CGO	Capt Lynsie Mariutto	4 ASOG (USAFE)	Ramstein AB, Germany
FGO	Maj Brandon Bailey	25 OWS (ACC)	Davis-Monthan AFB, AZ
CAT -I Civilian	Mr. Eric Shafer	23 SOWS/Det 1 OL-B (AFSOC)	JB Lewis-McChord, WA
CAT-II Civilian	Mr. Christopher Jones	23 SOWS/Det 1 (AFSOC)	Fort Campbell, KY
Squadron	1 CWS	PACAF	JB Lewis-McChord, WA
Team	N&NC	HQ NORAD/USNORTHCOM METOC	Peterson SFB, CO

2024 Army Weather Support Annual Awards

CATEGORY	WINNER	UNIT	LOCATION
Airman	SrA Uriah Clarkson	18 CWS/RF (ACC)	Pope AAF, NC
NCO	TSgt James Hale	31 OSS/OSW (USAFE)	Aviano AB, Italy
SNCO	MSgt Aaron Chiasson	23 SOWS/Det 1 (AFSOC)	Fort Campbell, KY
CGO	Capt Adam Brokaw	607 CWS (PACAF)	USAG-Humphreys, S. Korea
FGO	Maj Justin Leo	3 CWS (ACC)	Fort Cavazos AIN, TX

2024 Thor's Legions Forecast Challenge

A big 2xHUA to **Team SWO Hard or Go Home!** on taking hammer in the 2024 Thor's Legions Forecast Challenge! The ACC OL-G/FORSCOM team hailing out of Fort Liberty, NC consisted of SMSgt Ryan Hunt, MSgt Zachary Wilkinson, and Mr. Davie Lewis (SWODEN)!

From 39 teams down to 16 in week one, the top teams competed in an intense bracket followed by all to determine the best forecasters in the legion. In a nail-biting finish, team SWO Hard or Go Home! edged out last year's reigning champions, the **CAPE'd Crusaders**, by a mere 5 points! The competition was fierce, with both teams showcasing their exceptional forecasting skills, but in the end, team SWO Hard or Go Home!'s expertise and strategy paid off.

Huge congratulations to all of the award winners!

HAF/A3W Leadership—The Director's Corner

Weather Family,

As this year comes to a close, let's reflect back on the many accomplishments and progress made within the career field for the Air Force. As we all know, the SECAF and CSAF pushed a mandate that the Air Force must change if we are to succeed in a Great Power Conflict against China, Russia or another near-peer state. For the past 20+ years the Air Force inherited air supremacy, and as a result, realized they could prosecute a counter insurgency style fight within the execution cycle (or the Air Tasking Order cycle). Now that we're pivoting to a peer-on-peer fighting style, the Air Force must deliberately plan their actions to obtain and maintain air superiority. Air Force Weather (AFW) is not ready for that pivot…yet.

We've lost our muscle memory on how to plan, how to integrate into the planning and targeting cycles, and ultimately how to use our weather tradecraft as a weapon. So, we began the process of turning this large apparatus to meet the new challenge. For the past year and a half, we've been laying the foundation to ensure a successful transition into a new era for AFW. We spoke with almost all the Air Component and MAJCOM A3s, or Operations, Plans, and Requirements Leadership, about where we should be, how we intend to get there, and what it means to the Air Force and the Combatant Commands when we do. Every one of those general officers enthusiastically supported the concept. We drafted a vision statement for AFW Operations, that the SECAF approved and signed. The HAF/A3, Lt Gen Spain, then issued a General Administration (GENADMIN) order to all the MAJCOMs and Air Components to take action toward that vision statement. The tasks were broken into short-, medium-, and long-term actions.

Colonel Patrick C. Williams
Director of Weather

In the short-term, Air Components and MAJCOMs would use organic weather resources to fill other parts of their staffs (primarily the planning, targeting, exercise, IW, B2C2WGs, and OPTs). I highly recommend looking these acronyms up. As a bridging mechanism (medium-term), ACC granted the 557 WW/CC Direct Liaison Authority (DIRLAUTH) to work directly with those Components for the purpose of creating operational and strategic level outcomes (like OPLAN development, defining the "when" and "where" within targeting cycles, exercise inputs, etc.). Lastly, the HAF/A3 tasked the HAF AFW team (HAF/A3W) to stand up a working group to develop a flight plan and milestones with dates

on how to best use AFW capabilities and assets within the Air Force and DoD.

In the meantime, we are revising policy (e.g., AFI 15-129), we are updating our training pipelines and courses, and we are ensuring our strategic focus aligns with the new vision. Those efforts are in various stages of completion, but I anticipate it will be done within the next 6 months. Spoiler alert: We were able to get legislative language into the 2025 National Defense Authorization Act (NDAA), so we are eagerly anticipating the budget getting passed into law to unveil that gem.

So, what does all that mean? First, AFW is a combat capability, a capability you provide through your tradecraft. Every 15W and 1W will focus on the mission instead of the science. This refocus doesn't mean forgetting the science, it means applying the science toward the mission, with the mission being the priority and sole focus of the work. Second, AFW will follow institutional processes. "Reach back" to another weather unit outside of your chain of command is dead. If you cannot perform the mission given to you, it's because you don't have the proper comms, access, or capacity to do your job. That's a commander's problem. Communicate through the chain of command and allow them the opportunity to address it. Third, the 557 WW's mission and priorities are also shifting toward mission, but at the operational and strategic level since they have the only capability to do so at the moment. Yes, they'll still push common meteorological products and model outputs for everyone to use. Most Combat Weather Units and OSS Weather Flights will focus on the tactical aspect of the mission. Lastly, to better focus our attention on the mission, we are revamping our training pipelines, CFETPs, qualification procedures, and introducing certification processes. The intent is to grow more senior leaders in key leadership positions and create operational planners applying weather tradecraft (a unique combat capability within the DoD).

Said another way, new accessions (Amn and Lts) will continue perfecting their tradecraft, learning the finer points of meteorology, forecasting, and applying it to the mission. Don't anticipate significant changes to the first few years in AFW. These ranks will focus on resource protection, mission generation, and tactical outputs, primarily for blue forces. The NCO and Capt-Maj ranks can expect more integration tasks, involvement in scheduling, planning, targeting, exercise development, and execution. These ranks will see a shift from work on the "counter," to working on creating operational effects through their respective units and will start focusing on the adversary's reaction to particular weather events. The SNCO and Lt Col ranks will lead us through this process, oversee our Airmen's training, as well as work towards strategic level outcomes. Their efforts will deliberately focus on predicting adversary reactions to weather events, and more importantly create plans to exploit that reaction. The Chief and Col ranks will manage policy adjustment, training, and resourcing to meet the demands of the DoD and AF's challenges.

Everyone has a role in this transition. Stay safe this Winter and enjoy the holidays.

Col Pat Williams

HAF/A3W Leadership—The Chief's Corner

Reflections of an old Weather Chief

In April 1994, I embarked on a journey that would span 31 years. As I prepare to pass the torch to the next generation of Air Force Weather Warriors, I'm filled with gratitude for the experiences and accomplishments we've shared.

It's been an incredible ride, and I can't imagine a more fulfilling way to conclude my career than as your career field manager. With the support of many talented individuals, we've made substantial strides in modernizing our tech training, streamlining our enlisted development team processes, and investing in the professional development of our force.

A New Era of Tech Training

We've launched the most significant upgrade to our tech training program in over three decades! This overhaul is designed to equip you with the latest skills and knowledge to excel in today's rapidly evolving digital landscape. From cutting-edge software to innovative methodologies, this revamped training will empower you to take on the challenges and opportunities the Air Force Weather enterprise will face in the future.

Streamlining Your Career Path

We've also made significant strides in streamlining the enlisted development team process. As a result, we have reduced the number of non-volunteer PCSs for SNCOs, and created a more stable and predictable career path for our talented leaders. This change will allow you to focus on your professional development and contribute meaningfully to the development of your team. Also, it will allow you to add even more value to your organization's missions.

Investing in the Future of 1W

In a groundbreaking move, we've launched the Enlisted Education with Industry program for 1Ws. This initiative provides selected individuals with the opportunity to gain real-world experience and cutting-edge training through partnerships with industry leaders. By the end of Summer 2025, we will have four highly skilled graduates from this program.

Chief Master Sergeant John R. Rosario
1W Career Field Manager
AF/A3W Senior Enlisted Leader

A Heartfelt Thank You

I want to express my sincere gratitude for your unwavering dedication, hard work, and warm hospitality over the past three and a half years. It's been an honor to visit and interact with all of you, our amazing Weather Warriors! Your contributions have been instrumental to the successes of the Air Force Weather enterprise. As I pass the torch to CMSgt Sara Klobucar, I'm confident she's the right leader at the right time to guide you into the future. Enjoy the ride and rock on, my friends!

HAF/A3W Leadership—Notes from Col Jonathan "SE" Sawtelle

1. We are in the profession of arms. We are leaders, co-equal teammates, problem solvers, and warfighters.
2. Instinctively, with each new assignment we must derive our purpose, affirm our priorities, uplift our comrades, impose cost on our enemies, and help others to do the same.
3. Our purpose is to apply our education, training, and confidence toward superior judgment, advice, and decision making.
4. Our decisions help solve problems for our teammates and create dilemmas for our competitors and our enemies.
5. There are no perfect "Org Charts." Solving problems requires navigating personalities and processes to create value and get things done.
6. Navigating personalities requires cultivating relationships and credibility. This takes time, intention, and practice.
7. Navigating processes requires the judgment to know the short- and long-term risks of depending on or abandoning a checklist. This also takes practice.
8. Leaders, co-equal teammates, problem solvers, and warfighters do not use the word "customer."
9. The customer service paradigm subjugates a capability and a person into a simple and efficient reactive transaction.
10. Teammates and problem solvers must be proactive and demonstrate initiative.
11. Improper application of an inadequate metaphor introduces risk to mission, risk to force, and risk to relevance. For example:
    a. "Customer service skills." Good communication skill, studying decision makers and the context in which our challenges exist is healthy and necessary. However, we cannot rely on transactions and processes alone to ensure team success.
    b. "The customer is always right." In warfighting, no one is always right. The rigors of preparing for and executing combat operations demand that teammates are also trusted advisors. We must have the expertise and confidence to speak up, create value, and improve commander decisions.
    c. "No refunds or returns." Operations are inherently dangerous. If our team fails, some may not return.
12. The conviction that we are co-equal teammates will become a longstanding tradition when each of us strives to grow in character and in competence.
13. Growing in character is best accomplished by being self aware, attuned to others, and routinely seeking, providing and translating feedback into meaningful action, for a lifetime.
14. The idea of being leaders and co-equals will always be under assault.
15. Fragile character is no substitute for trust: To serve our country, we must serve each other on all fronts—abroad and within.
16. The most important competition that must be won is within us:
    a. The steadfastness of a courageous heart, or the chaos of pride.
    b. The calm derived from knowing who we are and what we're here to do, or frantic and unreliable words and actions.
    c. A penchant for admiration and respect of others, or creating wounds from unnecessary rivalry and division.
17. We are in the profession of arms. We are leaders, co-equal teammates, problem solvers, and warfighters.
18. We must instinctively derive our purpose, affirm our priorities, uplift our comrades, impose cost on our enemies, and help others to do the same.
19. Let's. Go.

Col Jonathan Sawtelle, 15W Career Field Manager

Adversary Forecasting, Part II

By Mr. Corey Hummel, Chief, Weather Integration for National Intel (and A3W adversary forecasting POC) HQ USAF, A3WX

Since the last article on adversary forecasting in Vol 12, August 2024, there have been some changes here at HAF after summer rotations. As such, I would like to thank Lt Col Molly Butler for her tremendous efforts in leading the effort to put our arms around what the term adversary forecasting means and where Air Force Weather Operations (AFWO) should be heading. However, since change is constant, I recently took over as the HAF POC for adversary forecasting. To briefly introduce myself, I have 21 years of active duty operational and staff experience and seven years of civilian time here on the HAF staff, namely as a liaison to the Intelligence Community. I'm excited to pick up where Molly left off and help shape what is an exciting new area for AFWO.

RecentlyNow that the new AF Weather Operations (AFWO) Vision wasis published and it emphasizesalong with a GENADMIN, the new Vision continues to emphasize adversary forecasting as one of strategic shifts for AFWO. Specifically stated in the new Vision, "Understand and capitalize on adversary limitations and responses to environmental conditions, to optimize friendly freedom of actions and maneuver." Lt Col Butler, in her first article, explored what that definition means, provided reinforcements for why we are focusing on this topic by highlighting several national strategic documents, and provided a short generic vignette of what adversary forecasting analysis would look like. I will pick up where she left off by helping you understand how to do this. Now admittingly, I'm not the SME on this topic, nor do I expect to be, but we here at HAF understand there are some 'silos of excellence,' and we want to exploit that to the fullest. Therefore, I would like to break down these silos and spread the word to the whole AF weather community with these best practices.

I wanted to reemphasizere/emphasize some key questions to get this concept off the ground. The first question is understanding what are the weather limitations of the adversary's weapon systems. I'm sure you are wondering how do I obtain this information? Short answer is, its not the sole job of AFWO to do this. Rather, the heavy lift of this task belongs to the Intelligence Community (IC) (albeit w/ some perspective from the weather community). We here at the Air Staff, along with our partners in the Headquarters, Department of the Army Intelligence (HQ DA G-2), various 3-letter IC agencies, and teams from the 2WS, are improving our knowledge of these limitations and will be working to share this information on the appropriate classified enclaves with you.

On a side note, for those of you who have already taken the initiative with your G/A/S/J-2 partners, I'm very interested in obtaining any info you wish to share with me so I can collate and share further.

Second key question is understanding the adversary's weather forecasting capabilities. This understanding is necessary to know their strengths and weaknesses and how they conduct meteorological operations. Third, how do they integrate that information? This is a more challenging question since we're talking about the human element here, and thus takes rigor to answer. This can be framed in a familiar military term from the great airpower theorist John Boyd, called the observe, orient, decide, and act (OODA) loop (see AFDP 3-0). Additionally, decision-making revolves around operational risk management (ORM). Knowing this 'human element' adds context to how the adversary responds to the weather and other physical environmental parameters, as Lt Col Butler mentioned. Therefore, these three key questions help understand how environmental conditions impact the adversary's behavior and decision cycle. Thus, weather Airmen can identify windows of opportunity for friendly forces to act and create effects.

To conclude, for the time being, I'll be setting up a working group (TBD) to help break down the silos. I will use the WG to share information, in addition to other publications such as Thor's NOTAM, and additional guidance from HAF in the future to help you execute the AFWO Vision. I can be reached at:

U: corey.hummel.1@us.af.mil

S: corey.j.hummel.civ@mail.smil.mil

S: corey.j.hummel@nga.smil.mil

TS: corey.hummel@af.ic.gov

TS: corey.hummel@coe.ic.gov

Getting to Know Our Airmen

TSgt Zachary T. Hulsey

5th Operational Weather Flight, Shaw AFB, SC

Job title: Weather Craftsman

Years in the AF: 8

Hometown: Midland, TX

Hobbies: In my civilian life, I volunteer at a local High School to help with their marching band program. I also play various gigs on the French Horn.

Where do you see yourself in 10 years? I hope to be an experienced High School band director and to be putting the finishing touches on a Doctorate of Musical Arts.

What accomplishment are you most proud of? Getting the opportunity to work the CARCAH mission has been the most rewarding work I've done in the military. I love having the opportunity to work with and learn from the Hurricane Hunters - I'm extremely proud to be supporting their mission.

Who is your role model? Dr. Isaac Brinberg has been an excellent role model for me the past few years. His leadership and teaching style focuses on tailored positive reinforcement - a style not often seen from military leadership. Working with him during my degree path has made me a more relaxed and effective leader in my military career.

If you won a million dollars, what is the first thing you would buy? The services of a lawyer and an accountant, in that order!

What is an item on your bucket list? My dream job has always been to perform music at the highest level. Recently, I've been enamored by the thought of performing in a studio band for a Disney movie - one can dream!

Getting to Know Our Airmen

Releasing a balloon on the USS Portland

SSgt Nathan Naill

45 WS, Cape Canaveral Space Force Station, FL

Job Title: Weather Journeyman

Years in the AF: 6

Family/Hometown: Dixon, IL / Wife: Klaryssa / Daughter: Freya

Hobbies: Running and playing video games/watching movies

Where do you see yourself in 10 years? Commissioned as an Air Force Weather Officer

Who is your role model? My dad

What accomplishment are you most proud of? TDY with the Navy, releasing weather balloons to assist recovery operations for the Artemis 1 capsule after it splashed down in the Pacific

If you won a million dollars, what is the first thing you would buy: New cars for me and my wife (my Camry just hit 200K miles)

What is an item on your bucket list? Go to a Metallica Concert

Getting to Know Our Airmen

SrA Alysia Quintana-Olmos

56 OSS, Luke AFB

Job title: Weather Journeyman

Years in the AF: 6

Hometown/Family: Fort Worth, Texas

Hobbies: Volleyball, Fantasy Football, Traveling

Where do you see yourself in 10 years? Living in Germany

What accomplishment are you most proud of? Earning my Stetson from the 17th Cavalry Regiment

Who is your role model? Dirk Nowitzki

If you won a million dollars, what is the first thing you would buy? A personal chef

What is an item on your bucket list? Attending The FIFA World Cup

The SWO Enterprise in the Environment of Change

By Lt Col Adam King, Chief, Army Weather Operations and Policy HQDA G-2, DAMI-OI (AF/A3WP)

The Environment of Change

The global security environment has changed. Emerging from 20 years of counterterrorism and counterinsurgency operations, the Department of Defense's, the Air Force's and Air Force Weather's strategic focus have shifted to Large Scale Combat Operations and competition against the United States' pacing and regional threats: China, Russia, North Korea and Iran. General Charles Brown set the Air Force on a course of "accelerate change or lose." His successor, General David Allvin has charged the Air Force to "follow through" on the transformative changes for Great Power Competition.

The Army is facing the same uncertain environment and is likewise pursuing change at a rapid pace. Secretary of the Army, Christine Wormuth, in her 2024 posture statement call highlighted, "The Army must continuously transform to adapt to the rapid pace of change occurring now." The Army is driving continuous transformation in contact, developing the capability to converge effects on land, in the air, sea, space and cyberspace. It is modernizing its warfighting capabilities to communicate and share data, see and sense further, produce low signature and highly lethal forces to dominate the offensive and defensive fires in support of the joint force on contested terrain.

Air Force Weather Operations leaders recognized this environment of change, and the need for the weather enterprise to adapt. Secretary of the Air Force (SECAF) Frank Kendall has charged us to change, "Air Force Weather Operations, through expanded integration early in planning and targeting processes, the agile use of data, and a mission-focused approach, will exploit environmental effects to create dilemmas for adversaries and optimize friendly freedom of action and maneuver."

The Mission Focused Approach

Headquarters Air Force convened a working group in late 2023 to conduct a non-materiel solution study to gain insights into how the Army Weather Support mission should change to meet the environment of change. This working group utilized the Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTmLPF-P) framework to produce a change recommendation to the Director of Weather for consideration and implementation. This recommendation focused several efforts for transformation.

First, Air Force Weather is changing its force presentation to the United States Army to increase flexibility and match its renewed focus on its principal warfighting units, the Division and Corps. In August, the Air Force's Deputy Chief of Staff for Operations, Lt Gen Adrian Spain, issued a tasking order to Air Combat Command to draft and pilot new Army Weather Support Unit Type Codes (UTCs). It is consolidating from fourteen Army echelon-based Weather Support UTCs down to two. These UTCs reflect doctrinal changes within the Air Force and follow the SECAF's weather vision. The UTCs posture weather planner and weather mission generation teams for tasking and integration into aligned and apportioned Combatant Command land components. Instead of being tied to specific echelons, the new UTCs give war-planners, senior Staff Weather Officers (SWOs) and Joint METOC Officers access to larger institutional pools of manpower. The elimination of specific echelon UTCs empowers leaders to better align their assigned and apportioned forces to the point of need, enabling friendly action and freedom of maneuver.

Additionally, with the launch of the Air Force Forces Generation (AFFORGEN) system, the Air Force will be ending directed habitual alignment, that is aligning specific Army Weather Support units to specific Army units. Army Service Component Command SWOs will coordinate with their Air Force Major Commands to posture their available forces to best meet U.S. Army needs balanced against capacity. The Air Force will deploy SWO teams with collo-

cated Army units to the maximum extent possible but does not have the capacity to habitually align its SWOs within AFFORGEN.

The Air Force may support to echelons below the Army's units of action through close coordination of Army and Air Force Commanders. Additionally, reach back operations through CCMD assigned/apportioned forces and data driven decision support provide Commanders at all levels access to weather and environmental information. Inter-service cooperation will enable these alternatives with enterprise weather data management, including data governance, architectures, integration, data services requirements, and security implemented in coordination with service Chief Information Officers.

With major changes to SWO force presentation, this presents a good opportunity to review the manpower standard for Army weather support as well as how the MAJCOMs have their SWO teams organized. In concert with the rest of the Air Force Weather Community, our MAJCOM leaders and service headquarters staffs will examine the service organization of weather personnel as part of implementing the SECAF's Vision for Weather Operations. This cross-functional team will identify resource and access requirements necessary to accommodate weather Airmen within these teams and identify gaps for further resourcing.

Creating Dilemmas

As much as the presentation of Army Weather Support is changing, its training must change as well. The Army is shifting to division-centric warfare with a focus on multi-domain operations, modernizing its sensing, reducing its signature, delivering precise, long-range fires while sustaining the fight across contested terrain, protecting joint forces and communicating and sharing data. As the Army modernizes, the requirements for in-person support versus data-driven, over-the-horizon support must necessarily change. To meet that change, Army weather support SWOs will need to become versed in the Army's Information Advantage doctrine.

Necessarily, becoming versed in Information Advantage will drive changes to how SWOs are trained. Efforts are underway to have the Army Weather Support Course (AWSC) at Fort Huachuca, Arizona realigned through the Army Critical Task Site Selection Board (CTSSB). The CTSSB is a tailored Army process which determines the critical tasks for training. The proposed restructuring of the AWSC will involve a careful examination of the current curriculum to eliminate any outdated tasks and a strong emphasis on integration and planning aspects to best align with the Army's key focus areas and integrating weather data into the Army specific planning. By creating strong Army Weather planners and integrators, Air Force Weather will enable Army Commanders to cut through indecisiveness and seize the information advantage, aiding freedom of maneuver across the military domains.

The Future

Future SWOs will be agile thinkers and leaders capable of synchronizing weather and environmental information advantage into plans and targeting processes for their Commanders. They will be assigned to an AFFORGEN cycle with a team forming a distinct weather capability. That team will be matched against an Army unit of action through Global Force Management.

The individual members will receive individual and top-up training in their Reset phase, transitioning to team and force element training and exercises in the Prepare phase. In the Certify phase, the team will be tested through exercises and a certification event prior. In the available to commit phase, the team will complete a rotational deployment or be on standby for a contingency or even a ready response force. Upon deployment, they will be placed at the point of need, maximizing the impact to the Commander's mission and aligned forces. They will return home to share their lessons and wisdom, building the best Air Force Weather capability and community. Through these changes, the enterprise will meet the SECAF's intent and the Army's requirements.

Global Hydro-Information: A Strategic Tool in Great Power Competition

Louis Escamilla, HAF/A3W & Dr. Kristi Arsenault (NASA; SAIC); photos: Cpl. Joseph Spraktes, Amvid Photo;
Chad Trujillo, USAF; Lt Col Matthias Radochla, HQ USAF/A3W German Exchange Officer

Left to right:

- Dr. Matthew Farthing, SES, ERDC
- Dr. Julie Robinson, deputy director of Earth Sciences at NASA HQ, Washington DC,
- DR. Christa Peters-Lidard, Director, Sciences and Exploration Directorate, Goddard Space Flight Center (GFSC), Greenbelt, Maryland
- Col. Patrick Williams, Director of Weather
- Maj. Gen. John Klein Jr., Air Force Deputy Chief of Staff for Operations
- Dr. Jerry Wegiel, SAIC

On October 30, 2024, a significant milestone in hydrological information was celebrated with a ribbon-cutting ceremony marking the transition of the Global Hydro-Information (GHI) system from NASA to the Air Force. This event, held at the Headquarters, Air Force, Pentagon, was a testament to the collaborative efforts of multiple agencies and marked the operational readiness of a system designed to provide an asymmetric advantage through advanced hydrological forecasting.

The asymmetric advantage of the GHI system is fundamentally linked to national security due to its critical role in addressing transboundary water issues. These issues are a significant concern for U.S. national security, as highlighted by the U.S. intelligence communities. The coordination over shared water resources is projected to intensify under increasingly complex population dynamics, political tensions, and a changing climate. By providing near-real-time assessments of surface hydrology features and impacts, GHI helps mitigate the hydro-information gap identified by the defense and national security communities.

The ceremony was emceed by Mr. Corey Hummel, who has been involved with GHI for eight years, and Mr. Louis Escamilla, the lead for hydrology and GHI at the Headquarters Air Force staff. The event was hosted by Col. Patrick Williams, Director of Weather at HQ USAF, and featured notable participants including Maj. Gen. John Klein Jr., Assistant Deputy Chief of Staff, Operations, HQ USAF; Dr. Christa Peters-Lidard, Director of the Sciences and Exploration Directorate at NASA Goddard Space Flight Center; Dr. Julie Robinson, Deputy Director of the Earth Science Division at NASA Headquarters; Dr. Jerry Wegiel, NASA Principal Investigator for GHI; and Dr. Matthew Farthing, Senior Research Scientist for hydrodynamic phenomena at the US Army Research and Development Center (ERDC).

GHI represents a groundbreaking advancement in hydrological information, offering a consistently available source of global water assessments. These assessments provide critical insights into surface hydrology features such as streamflow, flood risk, and drought, which are essential for military and strategic planning. The GHI system's capabilities are comprehensive, covering a range of time scales that include near-real-time re-analyses (from 12 hours in the past to the present), medium-range forecasts (up to 16 days ahead), subseasonal-to-seasonal (S2S) predictions (out to nine months), and long-term inter-annual projections (to the end of the 21st century). This extensive temporal coverage makes GHI an invaluable tool for anticipating and managing hydrological challenges, providing a strategic advantage in diverse operational environments.

GHI's operational capability is a testament to the power of interagency collaboration. Developed jointly by NASA, ERDC, the Navy, Air Force, National Geospatial-Intelligence Agency (NGA), and associated contractors, GHI integrates hydrological data into decision-making processes. This integration ensures that GHI provides a strategic advantage by offering accurate, timely geospatial intelligence. By supporting war-fighters, planners, and decision-makers at all echelons and services of the U.S. military and Federal government, GHI plays a crucial role in enhancing military readiness and strategic planning. Its ability to monitor and forecast hydrological conditions across multiple timescales makes it an invaluable tool for anticipating and managing hydrological challenges, thereby supporting the U.S. Global Water Strategy.

The ceremony concluded with the symbolic "Passing of the Trident" from NASA to the Air Force, representing the transition of GHI from research to operational deployment. This gesture, along with the ribbon cutting, marked the opening of a new chapter in leveraging advanced hydrological information for strategic decision-making.

As GHI becomes operational, it promises to enhance military readiness and strategic planning by providing accurate, timely geospatial intelligence. Its integration into military operations will improve situational awareness and decision-making efficiency, offering a strategic advantage in diverse operational environments. The GHI system stands as a testament to the power of accelerating interagency co-development of innovative solutions to address grand environmental challenges, specifically pushing the boundaries of what is possible in the hydrological forecasting and intelligence domain.

Weathering the storm – Senior Airman Bivins

By SrA Antonio Salfran , 49 WG/PA

It's a Sunday evening in late May of 2008, and things usually move slowly at this time of the week. Dad makes you a bowl of mac and cheese and serves it to you at the kitchen bar, facing the north window of your home. But something is off; something is different. When you sit to eat, you glance forward through the window and feel a knot form in your stomach as you watch an unrelenting black mass tear through your neighboring town of Parkersburg, Iowa. Your hands start to get cold, and so does your mac and cheese.

After the storm subsides, you hop into your dad's truck and head into town with him to make sure any nearby families are safe and accounted for. That's where you get an up-close look at the catastrophic fallout created by an EF-5 tornado in under three minutes.

Most people can't grasp what this feels like, but it was a defining moment for U.S. Air Force Senior Airman Megan Bivins, who lived it firsthand at seven years old. She recalls the day as a turning point, where fear and anxiety collided with curiosity and a newfound sense of purpose.

"I think that kind of sparked this fear about extreme weather, but also the need to understand and know more so I can protect my people the best way I can," said Bivins.

Though she had dreamed of being a veterinarian since she was a young girl, after experiencing the Parkersburg–New Hartford tornado, she frequently searched for ways to understand the disaster and its impact. Her dream of becoming a veterinarian would compete with her steadily increasing interest in meteorology.

Fast-forward to 2018, Bivins finds herself accompanying her father and brother to an Air Force recruitment office in Waterloo, Iowa.

At the time, she was only there to support her brother, who was considering joining. However, the recruiter let her know the various benefits and paths she could take through the Air Force.

"My recruiter told me about the various jobs available in the Air Force, and for some reason, one of the careers we spoke about was weather," she said. "They also told me the Air Force would pay for my school, so I thought, 'This is great—I can work in weather and still go to veterinary school.' So, I ended up putting weather at the top of my career list."

Though the journey was far from straightforward, Bivins ultimately secured the job she had hoped for. After a few unexpected twists and a second chance to list her preferred career fields, she was thrilled to discover that she had been selected to be an enlisted weather specialist.

She went through tech school and then to her first duty station at Fort Bliss, El Paso, Texas. Her career would require her to work as a staff weather officer supporting Army Air Operations, where she would have to work fast and be prepared to provide flyers with adequate weather information.

"I was completely trained up after two months; it was go, go, go!" Bivins said. "I was working with various helicopters, going on short duty tours to the Mojave

Desert, and I even had to work transient mission set while on deployment."

Regardless of the anxiety that came with keeping troops safe in a foreign land, that characteristic of keeping others protected allowed Bivins to excel at her job.

"We had a team of aircraft returning to base, but severe thunderstorms were rapidly closing in on the little gap of designated flight space we were allotted; they needed to get back quickly," she said.

In this situation, Bivins says the weather's unpredictability can complicate things. Rather than letting that fear–the very same fear that found her in 2008–overtake her, she focuses on helping others.

She pulled up real-time satellite and radar data to check on weather patterns in that area and instructed the pilots on areas where the flight was safe. This required her to remain calm and have faith in herself and her pilot's ability to navigate the dangerous situation properly.

"They were shooting the gap and weaving in and out of these thunderstorms; it was intense," said Bivins. "I was trying to keep them from running into the hazards generated by the thunderstorms, like turbulence and lightning, and they got back safe and sound."

Once the aircraft landed, the team welcomed them back to base.

"It's fulfilling to know there are so many ways for me to use my knowledge to help others," said Bivins. At Holloman Air Force Base, New Mexico, Bivins serves as a weather journeyman for the 54th Operations Support Squadron. When she's not monitoring the forecast for pilots in training, she stays alert to storms rolling through central Iowa, knowing she can assist from afar.

She says she'll pull up her radar application when severe thunderstorms are expected and check on everyone in her family. There have been times when she's monitored radar for several hours after working all day, watching until the storms have passed to ensure everyone is safe.

"Earlier in September, I was at home, and my grandma and I were talking to each other," said Bivins. "She told me she really appreciated those alerts I sent and that the warnings I sent get there before the tornado sirens go off."

She also told Bivins that the likelihood of them going into the basement is very slim because the forecasts may be inaccurate. However, she'll prepare once she gets her granddaughter's alert text or call.

At Holloman, Bivins is focused on keeping training pilots safe. She finds contentment in New Mexico and often reflects on her journey.

"I'm only 23, and I've already experienced so much," she said. "Some of it scared me, which I've had to deal with. But that's normal—it's all part of the human experience, you know? Fear, anxiety, all of it. There's nothing wrong with having those feelings. Don't let them shut you down; let them drive you forward."

In life, you'll face storms—some powerful enough to leave destruction in their wake. But by focusing on what you can control, you'll discover purpose and, through that purpose, the strength to rebuild, emerging stronger than before.

That's what Megan Bivins did.

56th Special Operations Intelligence Squadron – S-3W,

By TSgt William T. Cody III & TSgt Joseph W. Champion

SMSgt Charles Kuykendall – SEL

TSgt Joseph Champion – NCOIC

TSgt William Cody III – Weather Craftsman

SSgt Joshua Cochran – Weather Journeyman

SrA Michael Coakley – Weather Journeyman

SrA Seth Falkenburg – Weather Journeyman

SrA John Kochara – Weather Journeyman

Left to right: TSgt Champion, TSgt Cody, & SMSgt Kuykendall

The Mission:
SQ Mission: To deliver multi-modal information, processed through exquisite expertise, to SOF air-crew and the Joint Force

The S3/W team integrates environmental information into AFSOC's intelligence, surveillance, and reconnaissance mission planning and execution across 5 distinct joint operating areas in EUCOM, AFRICOM, and CENTCOM. The team serves as the single point of contact for AFSOC Group V-specific weather information, providing continuous support to 5 flying units from the 1 SOW, 27 SOW, and 919 SOW.

Why It Matters:
The MQ-9 Reaper is employed to an array of mission sets, ranging from intelligence reconnaissance and surveillance to precision strike/buddy lase. Our job is to know the complete picture of RPA airframe/munition capabilities, their weather limits, and leverage our weather expertise to ensure that our aircrew can safely operate the platform and complete their air tasking order to the fullest extent possible. This includes lost link mission planning and target acquisition weather impacts. In the last 24 months, we have surged forecast capability in support of Sudan civil war response, enabling establishment of command and control. These efforts informed US intelligence agencies, aiding the rescue of 2.6K civilians & 100 embassy personnel. Additionally, we have provided detailed weather information for 22 kinetic strike operations, that directly impacted the removal of 55 enemy combatants and execution of 40 direct action raids in support of counter-terrorism efforts. Furthermore, we pinpointed a precise weather window for the first-ever operational MQ-9 air-to-ground resupply mission, successfully validating a new capability for future combat environments.

Did You Know? AFW Policy is Changing

DAFMAN 15-129 Alignment with Air Force Weather Operations (AFWO) Vision

By Col Geoffrey Dawson, Chief, Weather Policy & Readiness Division • HAF

Why AFWO Policy Needs to Change

In September 2024 the SecAF signed an updated DAF Vision for Weather Operations that signals a strategic shift for AFWO. We are charged to expand early, mission-focused, integration into planning and targeting processes to exploit environmental effects, create dilemmas for our adversaries, and optimize friendly freedom of action. To succeed, we must offer commanders at all echelons greater flexibility and autonomy to apply your weather tradecraft to further mission objectives. One way we plan to do this is through a top-to-bottom revamp of DAFMAN 15-129, Air and Space Weather Operations.

Today DAFMAN 15-129 is the foundational policy document that prescribes, among other things, how AFWO personnel will provide airfield weather services, integrate weather information into planning and mission execution, and produce specific operational and strategic weather products from the 557th Weather Wing (557 WW). The new version out for coordination aims to give authority back to the chain of command by removing much of the "how" and instead focus primarily on the "who" and "what." In fact, policy-savvy readers may argue it is more appropriate to re-name the publication as an DAF Instruction vs a DAF Manual …. and they are right! That is under consideration.

If you have been around AF Weather for awhile, you have surely noted the trend to reduce the pages of guidance that unnecessarily constrain commanders. Not long ago, AFMAN 15-129 had two separate volumes, each 100s of pages long. Our volumes of weather policy reflected a time in the not too distant past when the Air Force Weather Agency (AFWA) was a Field Operating Agency under the Director of Weather. When AFWA fell under Headquarters Air Force, a significant amount of the weather enterprise was directly managed from HAF and robust policy was in force to do that. In the decade since AFWA evolved into the 557 WW, we've gradually consolidated guidance and ultimately collapsed into a single DAF Manual. That trend continues as the new draft cuts the currently published version in half and provides significantly greater flexibility to commanders to exercise their authority to apply your weather tradecraft to mission objectives.

Greater Flexibility to Exercise Authority in Conducting Mission Command

The new version of DAFMAN 15-129, while much shorter, is more focused on providing weather leaders flexibility to exercise authority within their respective chain of command. We stripped legacy requirements from the document and deleted unnecessary mandates that handcuffed commanders and AFWO personnel. It is important to note that just because some requirements are removed, it doesn't necessarily mean they were invalid requirements, or the work or products are not needed. Instead, it's part of a deliberate effort to get our weather requirements out of policy documents and in the right channels where commanders can advocate, risk can be assessed, and resources can be allocated.

We also removed much of the specific language that dictated "how" AFWO personnel should integrate into the mission. The aim is to provide maximum flexibility and autonomy to apply critical thinking, problem solving, and operational risk management to help decision makers at their respective levels. Our rule of thumb -- if a specific task was viewed as "Commander's business" then it was removed.

A final change to highlight is the removal of the Support Assistance Request (SAR) process. Under the legacy SAR process, units could directly request weather support capabilities to fill gaps across the enterprise, usually via reach back to the 557 WW. Moving forward, weather leaders will work with their local chain of command to follow institutional processes to request weather capabilities they are unable to meet. By taking this approach, local chains of command will have a better understanding of their current state of military readiness, unit commanders and MAJCOMs will have better visibility of capacity and capability shortfalls, and commanders will be in a better position to smartly advocate for resources using institutional processes.

The Strategic Imperative

More effective planning and the swift establishment of battlespace awareness will be critical to the DAF's success in the dynamic environment of Great Power Competition (GPC). The importance of infusing weather and environmental impacts – both friendly and adversary -- early and often into planning and decision-making cycles has never been greater. The re-write of DAFMAN 15-129 is geared towards enabling success in the GPC battlespace. The time for change is now and AF Weather policy is adapting to meet the new strategic imperative.

Weather from Above – 5 years supporting the Space Force

By Lt Col Kevin Eaton, Chief, Space Weather and Environmental EM Effects, AF/A3WX

The United States Space Force (USSF) is a dedicated branch of the military established to ensure the nation's superiority and security in the increasingly contested space domain, reflected in the USSF mission to "secure our Nation's interests in, from and to space."

For Space Force weather and environmental support, both on Earth and in space, USSF Guardians look to the United States Air Force Weather (AFW) community to provide a wide range of capabilities. AFW Airmen are stationed across the globe supporting a multitude of USSF operations.

Airmen and Civilians assigned to the 30th Operations Support Squadron and 45th Weather Squadron provide support for space launch operations, including on-console operations, directly impacting launch operations from both the west coast at Vandenberg SFB, CA, to the east coast at Patrick SFB/Cape Canaveral, FL. These Airmen and Civilians provide missile and spacecraft convoy products, pre-launch forecasts, and on-console weather support for missile tests, space lift missions, and space launch operations, both manned and unmanned. The Airmen deliver a wide range of environmental criteria, including eight specific lightning launch commit criteria (LLCCs) that can be triggered by the spacecraft itself as it flies through clouds. A spacecraft will not launch without a "GO" from AFW Airmen, making their mission critical to the United States' National Interests in space.

For assets in space, AFW Airmen provide direct and indirect support to every satellite in space, including the requirements process. Airmen assigned to the Combat Operations Division Weather Flight Within USSF's Combined Forces Space Component Command integrate 24/7 space and terrestrial weather support, conduct spacecraft anomaly assessments, and deliver space alerts and warnings to 70 space-based tactical units across USSPACECOM and USSTRATCOM. Additionally, AFW Airmen assigned to the Headquarters staff at Space Operations Command ensure programmatic success and requirements management for all space weather capabilities and USSF's weather environmental monitoring satellites. These satellites include the Defense Meteorological Satellite Program (DMSP), Electro-optical Infrared Weather Satellite – Geostationary (EWS-G), and Weather System Follow-on – Microwave (WSF-M), which provide the DoD, United States, and international and civil partners with space-based environmental monitoring. All these Airmen ensure the USSF can conduct safe and effective Space Domain Awareness Operations.

MSgt Samuel Davis inspecting the "eyes" of the optical telescope at the Holloman observatory. Photo by 49th Wg PA

Lastly, space weather is critical to all operations on Earth and in space. According to the DoD dictionary, space weather is the conditions and phenomena in space, specifically in the near-Earth environment, that may affect space assets or space operations. Space weather is a top priority for the Airmen of the 2d Weather Squadron within the 557th Weather Wing, who operate the DAF's only 24/7 Space Weather Operations Center. This center operates on all security domains, providing environmental anomaly assessments and space weather forecasts, alerts, and observed warnings to the DoD, Intelligence Community, and even our international partners including NATO. Additionally, 2d WS operates 5 solar detachments spanning the globe from the US to Australia to Italy, which observe the sun 24/7. These Airmen maintain continuous situational awareness of sun conditions and activity, visual solar observations and observed radio bursts, and issue warnings when solar activity reaches a certain warfighter threshold. Finally, 2d WS has a liaison that collaborates and directly sits with the NOAA Space Weather Prediction Center to ensure civil and defense efforts on space weather are synchronized. Without the Weather Airmen of 2d WS, the DoD, the United States, and the international community would be blind to space weather impacts that could affect aviation operations, communications, navigation systems, missile defense radars, and even electrical grids.

As we celebrate the USSF's 5th birthday, we must recognize that mission success in space would not be possible without the AFW Airmen supporting the USSF's 24/7 operations. From communications and navigation on the ground to launches into space to satellites operating in space, no mission would be possible without the capabilities that AFW Airmen provide around the clock to ensure USSF Guardians can conduct their missions safely and successfully.

Launch supported by the 45WS. Photo by Lt Col Matthias Radochla, AF/A3W

Did You Know? Education With Industry (EWI)

By TSgt John Johannes, EWI Alumni at Amazon, NCOIC for EWI Program

Education with Industry: Strengthening Air Force Weather

The Education with Industry (EWI) program gives select Airmen and Guardians the opportunity to work with leading companies to gain insight into best practices and innovative solutions. It aims to develop future leaders who are agile and ready to adapt to the demands of a connected world. Fellows learn private industry business methods and technologies, enhancing skills and directly benefiting our mission by strengthening capabilities and readiness.

Impact on Operations and Career Growth

EWI enhances Air Force Weather operations by integrating industry best practices, advanced technologies, and efficient processes to streamline mission objectives. Fellows bring back innovations that improve our ability to deliver accurate environmental intelligence, boosting daily operations and supporting strategic goals.

EWI also offers career growth, developing graduates for future leadership roles. EWI experience stands out in promotions, demonstrating a commitment to personal and professional growth. Fellows gain valuable skills in technology, collaboration, networking, and leadership.

Industry Integration

EWI fellows work with leading companies in technology, data analytics, leadership consulting and environmental sciences. This exposure allows fellows to bring back solutions that enhance weather operations. Working alongside industry leaders broadens perspectives and improves capabilities.

Selection Process

EWI is highly selective. Ideal candidates demonstrate leadership potential, technical proficiency, adaptability, and a strong interest in innovation.

Officers: The AAD/SPEED Guide is released annually in an Air Force wide PDSM, generally in early Spring (~beginning of April). Application instructions will be provided in this guide, but applications are typically due in June timeframe.

Civilians: Apply through the annual Civilian Development Education nomination call - held every Mid-January–Mid-March. Selections for EWI are made by the Air Force Personnel Center (AFPC), DPK based on competitive review of all applicants by individual Career Program identified through the Career Enhancement Plan (CEP).

Enlisted: Eligible personnel will get an Email from Talent Marketplace during application cycle (typically in August through September). You will apply through myVector and compete at a centralized application board where all enlisted candidates are competing against all other enlisted applicants.

EWI is more than professional development—it is a call to action for Airmen to grow, innovate, and make a difference. The next application cycle will select the 2026 cohort—don't miss this chance to shape the future of Air Force Weather.

EWI graduates lead transformational initiatives, driving innovation and mission success. As we advance our environmental intelligence capabilities, EWI ensures our

people are adaptable, forward-thinking, and ready for

Current EWI Weather Fellows

Hearing directly from past fellows is the best way to understand EWI's value. Below, you'll find testimonials from current fellows and Alumni about their experiences, skills gained, and contributions made.

SMSgt Richard Venizelos – EWI Fellow Currently at Palantir

I currently work at Palantir Technologies at their Washington, DC office with their Envision team. Envision is the DAF instance of the Foundry configuration of the Palantir Platform and is an enterprise data capability for data-driven decisions available to all Air Force and Space Force personnel with a valid CAC. I currently work alongside the Site Reliability Operations (SRO) Analyst. In general, the SRO is responsible for crafting, implementing and executing processes to streamline workflows and reduce friction. They track and stabilize projects, remove roadblocks, and anticipate customer needs to free up Envision engineers to focus their time and attention on the technical problems they are best equipped to solve.

As an EWI fellow, I provide my outside perspective to team internal processes, providing feedback and suggestions to enable continuous process improvement to better enable day-to-day operations. For example, I have refined their team onboarding process to better utilize engineers' time and ensure that engineers can make an impact for DAF starting on day 1. In addition, I am currently refactoring internal tooling within Envision to better capture relevant platform support data and drive data-driven decision making related to Envision platform support.

This leads me to one of the valuable aspects of the program: learning what our industry partners are using. Having never heard or worked within Envision or Palantir Foundry before onboarding into EWI, I have spent a lot of time becoming familiar with the platform and its various tools for data integration and analytics. Another valuable aspect of my fellows is seeing how Palantir builds and develops their engineers. Palantir engineers receive constant feedback whether that is through various internal platforms, recurring one-on-one mentorship or generally across the team in informal and formal settings. This feedback enables the engineers to recognize their 'spikes' and continue to hone those strengths.

Overall, my goals for the Air Force Weather enterprise during this fellowship are two-fold: 1) how can we as an enterprise better capture, analyze, and visualize atmospheric data and integrate seamlessly into plans and operations that focuses on and captures desired outcomes (e.g., increase in flight hours, mission success, adversary denial) and 2) identify ways to generate growth and development opportunities for the middle ranks (e.g., SSgts thru MSgts) that enables flexible and agile talent management (e.g., SEIs, Joint Experience). The United States military undoubtedly has an advantage in how we train and develop our NCO corps compared to our adversaries, and I want to leverage my fellowship experience for the Air Force and Air Force Weather to maintain that advantage.

MSgt Zachary Hargis – EWI Fellow Currently at Deloitte

I'm currently located in Arlington, Virginia working at Deloitte. After onboarding, you get assigned to a project team and find ways to learn and support that team. For one project I learned the basics of Agile and Scrum to assist the project Scrum Master. For another project I assisted an IT team helping business users switch from one data analysis and visualization program to another. The most valuable aspects so far have been seeing how these company teams operate together and how fast and effective they are. It's also valuable learning how they assist business users adapt and adjust to a utilizing a new reporting platform and how they guide them through that change. I'm still working on what I want to bring back to the AFW Enterprise, but I think learning the basics of Agile, Scrum, and project management provides a good starting point.

EWI Fellow Experiences (continued)

Maj Coy Fischer – EWI Alumni at Amazon, Currently BIFROST Project Manager

During my time with Amazon Web Services, I gained an invaluable technical foundation through certifications such as AWS Certified Cloud Practitioner and GovCloud 101. These certifications went beyond simple cloud computing basics – they equipped me with the language and conceptual framework to understand how modern cloud-native applications and services are developed and deployed. I also gained a new perspective on leadership by observing how to motivate teams in an environment where work ethic stems from a vision rather than a service commitment.

This technical knowledge gained in my EWI experience proved instrumental upon my return to the weather enterprise. As more industry partners migrate their operations to cloud environments, I found myself uniquely positioned to bridge communication gaps between government stakeholders and innovative industry leaders. The expertise gained at AWS allows me to effectively translate between industry best practices and program office development activities, ensuring alignment across technical and organizational boundaries. Witnessing the clear bias for action present in the commercial sector has further motivated me to be more intentional in pushing initiatives forward with a greater sense of urgency and spur action within my sphere of control.

Perhaps the most profound impact of my AWS experience has been gaining firsthand insight into how leading technology companies drive innovation at scale. I witnessed how a company of AWS's size maintains efficiency through clear vision and employee empowerment. Their distinctive writing culture, rather than PowerPoint presentations, exemplifies a standard of excellence – forcing teams to dive deep into their work and think through every outcome rather than relying on dynamic speaking skills to mask shortfalls. What struck me most was seeing how employees at every level took genuine ownership of their contributions, understanding how their individual efforts connected to larger organizational goals. This perspective on successful enterprise operations continues to influence my approach to leadership, accountability and service.

CHECK OUT THE EWI TEAMS PAGE! [DAF Education With Industry | General | Microsoft Teams]

TSgt John Johannes – EWI Alumni at Amazon, Currently NCOIC for EWI Program

While I was a participant in the Education with Industry (EWI) program, I worked for two different parts of Amazon. First, I was with Amazon Game Studios, where I helped the Studio Operations team reconfigure for post-COVID operations. After two months, I transitioned to AWS Disaster Response, where I contributed to the Ukrainian disaster response effort for NGOs and humanitarian organizations. During this time, I helped map out Amazon's first accurate picture of the Ukrainian government's digital transformation efforts.

Throughout the program, I gained valuable skills in project management and earned my AWS Cloud Practitioner certification. I also collaborated with Major Coy Fischer on an insight-to-industry project about leveraging enterprise efforts for disaster recovery within the context of data-disperse operations. These experiences broadened my understanding of how civilian industry practices can enhance our military operations.

Currently, I serve as the NCOIC for the EWI program, applying my skills more broadly to improve the program as a whole. In this role, I've leveraged my experience at Amazon to rebuild how we track information within AFIT civilian institutions, creating deeper insights for leaders. Additionally, I've been able to mentor and support Airmen from diverse backgrounds, using the lessons I learned during my time in industry to guide others in their professional growth.

Contact me directly for questions or you can email the org box @ afit.cig.ewi@us.af.mil

Midtour in Orlando 2023

Meteorological Support to Aviation Began at Fort Omaha

By Dr. Kent Sieg, Historian, 557th Weather Wing

Among the tenant units on Offutt Air Force Base, Nebraska, is the Air Force's only weather wing, the 557th, which is the latest iteration of what had previously been known as the Air Weather Service. But military meteorological support to aviation actually began at a little-known Army post in what is now the northeastern part of the Omaha metropolitan area. The first Army weather personnel active in the 20th Century would train at the fort in preparation for participation in WWI.

In 1868, the U.S. Army established a frontier post at this very site. A decade later, it had expanded to roughly 82 acres and was officially renamed Fort Omaha. Brigadier General George Crook, a veteran of the Plains wars and the commander of the Department of the Platte, established his command at the post in 1879 and would live there intermittently until 1888. After a larger post known as Fort Crook (now known as Offutt Air Force Base) was established south of Omaha during the ensuing decade, Fort Omaha would close by 1896.

However, in 1905 the Signal Corps reopened Fort Omaha to support early aviation efforts, initially for dirigibles. In 1916, the fort became a training school for the Army Balloon Corps. The Army also leased a nearby 119-acre plat that became known as Florence Field where balloon formations would be launched and landed. Even French military advisers assisted in training the regiments at the fort. Of the troops that would be trained during the war in balloon observation for purposes such as intelligence gathering and artillery sighting, a good number would include weather troops.

Aerial view of dirigibles above Florence Field, 1917

Balloon house and gas generating facility, Fort Omaha

By mid-1917, the already famed scientist and future Nobel laureate Robert A. Millikan had been brought into the Signal Corps, being directly commissioned and placed in charge of its Science and Research Division. A principal task delegated to him was to establish a weather service that could support what was then the Signal Corps Aviation Section. In short order, Millikan would be named as the first commanding officer of what would become the Signal Corps Meteorological Section

Millikan received authorization to appoint and enlist men on a broad basis. Initially, he selected meteorological professionals already working at the civilian Weather Bureau or teaching in universities, and then expanded the pool outward to include chemists, civil engineers, and others. By 8 July 1918, the authorized strength for this service would be 45 officers and 578 enlisted men.

During the early fall of 1917, Lieutenant Colonel Millikan had set up a program of instruction for meteorological personnel. Entry-level training occurred at Weather Bureau stations or on the job at their assigned units. More advanced provisional training would be conducted with the U.S. Army Balloon Corps stationed at Fort Omaha. Troops began arriving there to begin instruction that November. The first weather station of the new Signal Corps section also was established at this location, soon to be followed by 36 others set up within the Continental United States and several dozen overseas.

Troops would learn how to utilize equipment to measure atmospheric conditions that included thermometers, barometers, anemometers, rain gauges, sunshine recorders, electric quadruple registers, pilot balloons, and theodolites. The training school operated in Nebraska into the next year, but then (along with some of the Balloon Corps training program) was abruptly moved. Following brief operation at Camp MacArthur in Waco, Texas, by May of 1918 Millikan had ultimately established a formal weather training school, the Signal Corps School of Meteorology, at Texas Agricultural and Mechanical School (now Texas A&M University) in College Station, Texas.

Trainee numbers soon ballooned to over 300 troops. Upon qualification, these soldiers would be sent to France to support the American Expeditionary Force (AEF) headed by Major General John Pershing. Most resources were devoted to aviation but also supported chemical and ordnance units, military construction battalions, and artillery batteries. Of note, several dozen weather soldiers were even detailed to the Navy to operate the newly developed hydrophones that could detect submarine movement.

Lt Col Robert Millikan, 1918

Stereographic image of Signal Corps using a heliograph at Fort Omaha

By the time of WWII, Florence Field had been sold off for urban development. Yet Fort Omaha remained a military post, most notably becoming an induction center, a prisoner of war work camp, and a supply depot. Later, the Naval Reserve established a regional command on base. Ultimately, in 1974 the federal government surplused the entire site, save for a few buildings that military reserve units continued to occupy. Fortuitously, the old fort was secured by the Metropolitan Community College, where enlightened leaders have preserved the many remaining historical buildings while turning it into an innovative technical campus.

By NIPR GPT as prompted by Lt Col Adam King

AR 115-10/AFI 15-157: A SUMMARY IN SEUSS STYLE

In the land of the Army and Air Force, where rules are made with care,
There's a regulation that's important, with details to share.

It's AR 115-10 and AFI 15-157, a document of great might,
That guides the use of weather data, day and night.

It's a rule that's designed to help, with weather forecasts so fine,
To keep our troops and aircraft safe, and on schedule in line.

It tells us how to use the weather data, with care and with might,
To make informed decisions, and keep everything in sight.

It's a guide for commanders, and for weather folks too,
To help them make decisions, with the data they accrue.

It's a rule that's based on science, and on expertise so fine,
To keep our troops and aircraft safe, with weather forecasts that shine.

It covers the use of weather radar, and satellite imagery so grand,
And tells us how to use the data, to make informed decisions in hand.

It's a rule that's made to help, with safety as its goal,
To keep our troops and aircraft safe, with weather forecasts that make us whole.

Oh, the importance of AR 115-10 and AFI 15-157, it cannot be told,
It's a rule that's crucial, for safety to unfold.

So read it and heed it, with care and with might,
And you'll be making informed decisions, with weather forecasts in sight.

It's a document that's lengthy, with details so fine,
But it's worth the read, if you want to stay safe and in line.

So take the time to read it, and understand its might,
And you'll be making informed decisions, with weather forecasts shining bright!

DO YOU KNOW YOUR WEATHER SQUADRONS?

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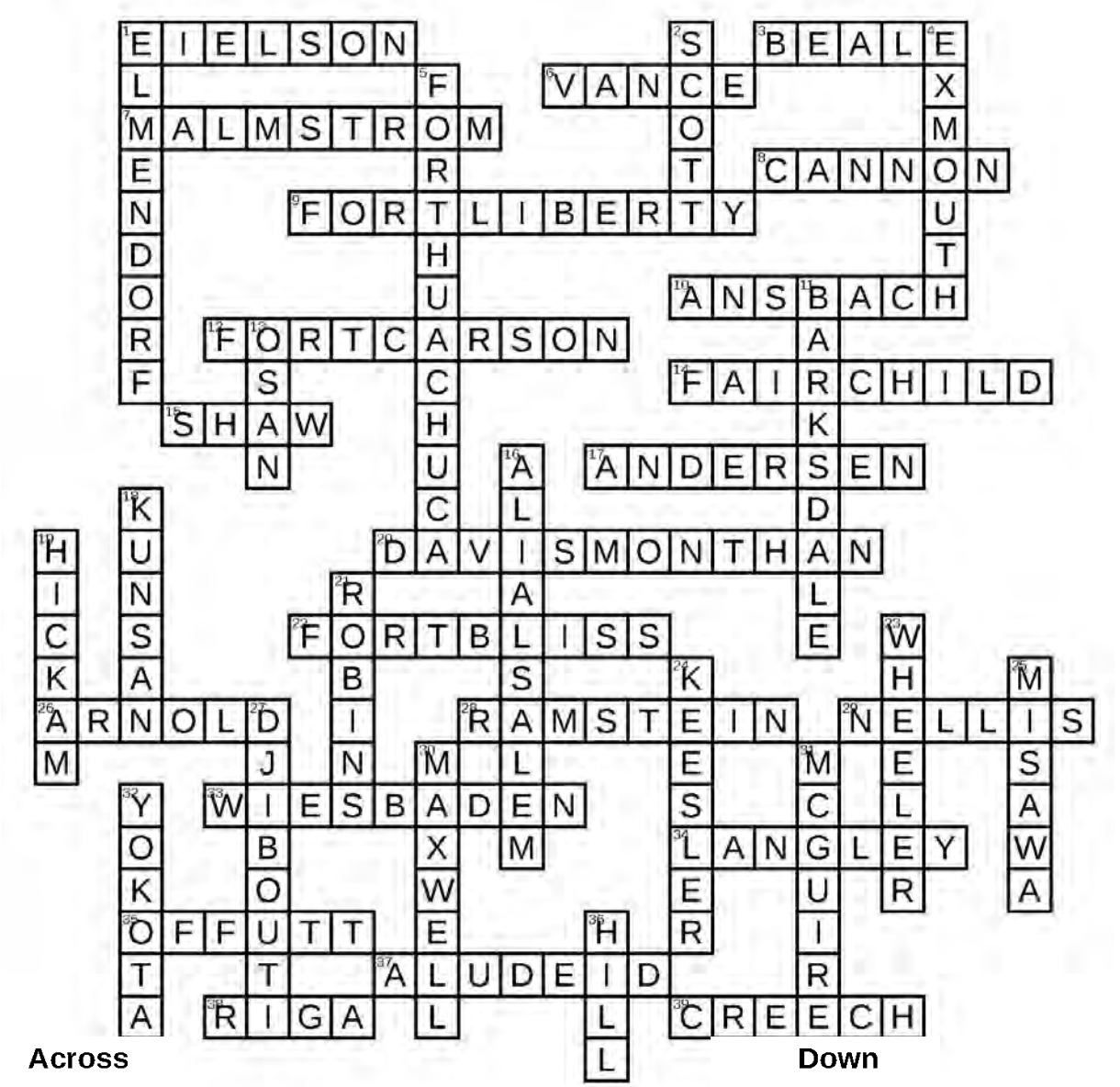
IF YOU NEED A LIST:	7 CWS	18 CWS	45 WS
1 CWS	13 ECWS	21 OWS	53 WRS
2 CWSS	14 WS	22 ECWS	96 WS
2 SYOS	15 OWS	23 SOW	607 CWS
2 WS	16 WS	25 OWS	
3 CWS	17 OWS	28 OWS	

Summer 2024 Weather Crossword Answer Key



Across

1 PAEI
3 KBAB
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7 KGFA
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10 ETEB
12 KFCS
14 KSKA
15 KSSC
17 PGUA
20 KDMA
22 KBIF
26 KAYX
28 ETAR
29 KLSV
33 ETOU
34 KLFI
35 KOFF
37 OTBH
38 EVRA
39 KINS

Down

1 PAED
2 KBLV
4 YEXM
5 KFHU
11 KBAD
13 RKSO
16 OKAS
18 RKJK
19 PHIK
21 KWRB
23 PHHI
24 KBIX
25 RJSM
27 HDAM
30 KMXF
31 KWRI
32 RJTY
36 KHIF

Air Force Weather Directory

The Current AFW Directory can be found on the A3W Air Force Portal Page:

https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s6925EC1350090FB5E044080020E329A9

THOR'S NOTAM

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Lead Editors/Contributors:

MSgt Brandi Brown, HAF/A3WT

Contributing Editors:

Lt Col Mickey Kirschenbaum, SAF/PAY; HAF/A3W

Mr. David Craft, HAF/A3WT

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IF YOU HAVE AN IDEA FOR A FEATURE ARTICLE, OR WOULD LIKE TO SEE YOUR TEAM OR AIRMEN SHOWCASED IN THE NEXT ISSUE OF THOR'S NOTAM, SEND YOUR IDEAS TO HAF/A3WT.

af.a3wt.af-a3wt-weather.force.management@us.af.mil