Your Magazine for Air Force Weather

OBSERVER

Aug/Sept 00

Combat Weather Teams Up Close

AFWA Awarded von Karman Award

Weather at JEFX 2000

Weather Meets FIRE

What's Inside

CHIEF'S MENTORING CORNER 4

AFWA AWARDED VON KARMAN AWARD 6

Air Force Association recognizes AFWA for its outstanding scientific contributions to national defense

PREPARE NOW: ANNUAL WEATHER AWARDS 7

WEATHER AT JEFX 2000 8

A LOOK AT COMBAT WEATHER TEAMS

Mildenhall CWT 9

CWT at ULCHI FOCUS LENS 10

Reflections: CWT Supports CPX 11

AFWA HELP DESK: Helping YOU 12

TRAINING: COMET Under Change 13

In Flight Weather Notification System Test 14

WEATHER IN USAF WEAPONS SCHOOL 15

WEATHER MEETS FIRE 16

Senior Airman Jorge Evans (right) and Airman 1st Class John Radford volunteered to assist firefighters battle flames in California and Montana.

LEARNING FROM DISASTER 18

WINDS OVER VOLCANO 20

WEATHER CHANNEL METEOROLOGIST 21

DID YOU KNOW? 24

WEATHER WARRIOR 26

SALUTES 28

AFW's new Colonels, Staff Sergeant Selectees and awards

ON THE COVER

Technical Sgt. Ron Burkhalter, Robins AFB CWT, checks the connections on the tracking antenna of the Small Tactical Terminal, while deployed to Warrior Air Base in support of the base's Operational Readiness Exercise.

OBSERVER

AIR FORCE DIRECTOR OF WEATHER
Brig. Gen. David L. Johnson

AIR FORCE WEATHER AGENCY, COMMANDER
Col. Charles W. French

PUBLIC AFFAIRS, DIRECTOR and Editor
Ms. Paige D. Rowland

PUBLIC AFFAIRS DEPUTY DIRECTOR
Ms. Jodie A. Grigsby

OBSERVER STAFF
Master Sgt. Michael G. Brooks

This funded Air Force Weather magazine is an authorized publication for members of the U.S. military services. Contents of the OBSERVER are not necessarily the official view of, or endorsed by, the United States Government, the Department of Defense or the Department of the Air Force. Editorial content edited, prepared and provided by the public affairs office of the Headquarters, Air Force Weather Agency, Offutt AFB, Neb. All photographs are Air Force photographs unless otherwise indicated. All written material and photos to be considered for publication must arrive at HQ AFWA/PA by the first week of the month prior to the month being published. Photos must be mailed to:

HQ AFWA/PA
106 Peacekeeper Dr., Ste. 2N3
Offutt AFB, NE 68113-4039

Please call (402) 294-3115, or DSN: 271-3115, for more information about this publication. Electronic mail should be addressed to:

"Observer@afwa.af.mil"

Brig. Gen. David L. Johnson
Air Force Director of Weather

Meeting the History of Weather

While attending the semi-annual Air Weather Association reunion, 20-24 September, Las Vegas, Nev., Brig. Gen. Johnson learned the history of weather from those who made it...

Chief Master Sgt. Penny Heinen and I had the pleasure of attending the Air Weather Association reunion mid-September in Las Vegas, Nev. I really enjoyed the interaction with previous commanders, chiefs, and the folks who built the foundation for Air Force Weather.

Most passed on experiences and history and sensitized me to subtle issues that would ordinarily take years to understand. Our history and our capabilities makes weather unique and special, and a successful contributor to Army, Air Force, and other military missions around the world.

Senior Air Force leadership to an ever-greater degree is recognizing our contributions.

Weather is healthy because, even as technology changes, the quality of our people remains high and our motivation remains strong. We are special because we care about each other and we take care of our own. We need only focus our energy on the highest priority issues to continue our track record of success.

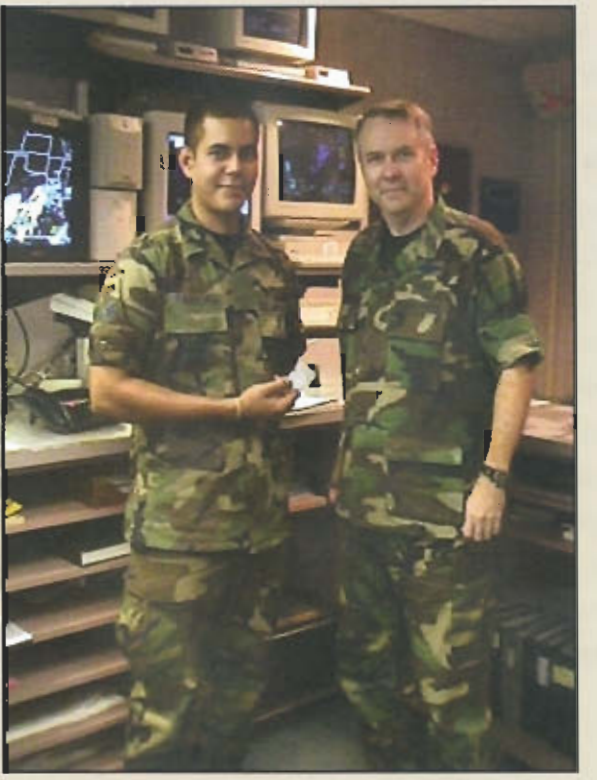
Along with Col. Charles French, commander of Air Force Weather Agency, I provided briefings to concerned, retired (and some not retired) weather people. I called it "a state of the union for our stockholders report".

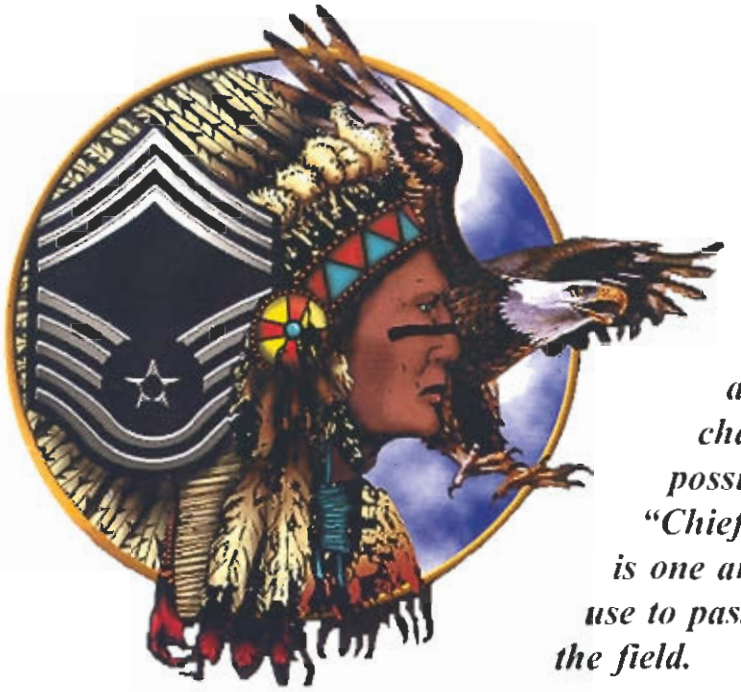
They listened attentively to the briefing, with the same anticipation shared by active duty weather personnel. The attention to detail and insightful questions asked confirmed the notion "once a weather person – always a weather person". These people had deep concern for our people and the future of Air Force Weather.

The event was extremely well attended and I believe, I shook hands with each of the 650 people at least once. Lord willing, I hope to shake those hands again in two years at the next reunion.

The COIN Corner

Airman 1st Class John Radford of the 21st ASOS, Fort Polk, La., received a AFW coin from Brig. Gen. David Johnson for his hard work and dedication while deployed to California and then, Montana assisting the National Weather Association. Radford and Senior Airman Jorge Evans of the 19th ASOS, Fort Campbell, Ky. volunteered to provide weather support to the firefighters during a two week period in early September. See full story on page 10.





CHIEF'S MENTORING

By Chief Master Sgt. Penny Heinen
Chief Enlisted Manager

As Brigadier General Johnson and I visit the units throughout the Air Force, we will see your unit in action, meet with the troops, answer questions or get the answers, and provide information to ensure we keep the field informed. The Air Force and Air Force Weather continue to change even as I write this article. Keeping the troops informed is the key to a smooth and painless change, if that is possible. The "Chief's Mentoring" is one area we plan to use to pass information to the field.

The subject of this first article should be near and dear to most of us—enlisted manning. I don't want to beat an old horse to death but this is the most talked about area everytime we get more then two weather people together. Remember, there is no easy cure when it comes to fixing manning. We cannot fix it overnight or in a few months. Everyone in your chain of command is painfully aware of the manning issues and there are many initiatives to help the problem. But we cannot grow skilled NCOs or officers over night—time is the key. Time, good quality training, strong mentoring and above all, strong leadership at all levels, pays the dividends in the end.

"...We cannot grow skilled NCOs or officers overnight-time is the key. Time, good quality training, strong mentoring, and above all, strong leadership at all levels, pays dividends in the end".

Before I address training specifically, let me provide a little philosophy on reengineering. Originally, we intended reengineering to be a 5-year plan. Since we began the implementation process we were directed to accelerate two times by the Air Force Chief of Staff—primarily because we knew that AFW units couldn't survive the pain of transition over a long period of time. Regardless of whether we are talking about the original completion date or the accelerated one, it is very important to understand what "complete" really means. When we say a unit completed re-engineering, it means the basic structure and processes are in place. By structure, I mean equipment, manpower slots, and funding to start the sustainment of a weather unit. By processes, we mean the concept of operations and methods for accomplishing the mission. This does not mean a magic end date to the manning, training, and experience challenges that drove us to reengineering in the first place. It may take another 3-6 years for the ultimate completion of reengineering and achieving the success we envisioned.

We are just now reaching the 1-year point

since the first graduates from the new Initial Skills Course (ISC) reported for duty at the operational weather squadrons as Forecaster Apprentices. It won't be until they complete their first tour, attend the Weather Flight Course, and start reporting to the weather flights that we will start to see real progress. All of the facets of reengineering must come together for us to succeed. It all comes together in the following way.

New airmen report to the OWSs where they receive training superior to what we were able to provide at the weather flights prior to reengineering. Except for those people who will go through the interim forecaster assistant program over the next several months, all new enlistees will spend their first tour at an Air Force Base. Please note we are calling these interim airmen Forecaster Assistants versus the Forecaster Apprentices who go strictly to a hub first. The Apprentices will get the training they need and immediately be able to work in a motivating environment performing forecasting tasks as opposed to strictly observing tasks as they have in the past. Once they complete their tour at an OWS, they attend the Weather Flight Course followed by an assignment to a weather flight. At the weather flight, their integration into the customers' missions and performance of duties involve far more than just observing tasks and provide a much more stimulating and satisfying environment. We anticipate their experiences at the OWS and the weather flight will encourage them to reenlist and remain a valuable part of a most exciting career field in service to their country.

But, all of the above takes time. Units will see gradual increases in personnel over a period of time. They may go through brief periods of decreases because it is not easy to shift people around. With the current shortages, it makes it harder to fill all the quotas out in the field. However, we will succeed. Since December 2000 is the one-year anniversary of the first ISC graduates leaving Keesler, we see relief in sight in October 2001. These young troops from the first classes will start attending the Weather Flight Course and units should start to see relief when the first graduates from this course start flowing to the field. One key to success is your unit training!

Plan now what to train and how. Don't forget to include the time for attendance to Airman Leadership School (ALS). Yes, this is important, too, for the enlisted Air Force career. You do not want to hurt an airman's promotions or stop a pin-on because of failure to attend PME. We expect these airmen to work hard and we need to ensure we do not hurt them where it really counts—family and paychecks.

All that information on the new airmen is fine but that does not help you at the units today. In the interim, we plan training for approximately 180 ISC graduates (Forecaster Assistants) in observing tasks to help fill the shortages in some units. These young troops started to arrive in September 2000 and will help complete some of the crucial elements in the observing and forecaster tasks at the weather flights. This should help relieve the current weather journeymen (also known as observers) so they may attend forecasting school sooner. I challenge you not to leave these Forecaster Assistants in observing tasks only! Remember that we trained them in forecaster tasks and we feel they can help your current duty weather technicians. They received training similar to your own experiences at forecaster school but not as much practice as you experienced in school. To ensure we do not hurt their training, we plan to carefully monitor these people and provide equal training at a hub as soon as possible to help round out their career. Their second assignment provides the opportunity for this training. Also, we plan to have them attend the Weather Flight Course to ensure the same level of training that their peers are receiving.

So when will your unit get better? Well, it depends on a lot of things from re-enlistments to these new airmen attending the ISC and WF courses. You have control in some of the areas—re-enlistments and training. Encourage others to stay by mentoring and guiding them. We all heard that person out there that says, "Why should I stay and work these hours? What do I get out of it?" How do you answer them? Be honest with your troops! We all know it's not just the money. Tell them how your unit stands and how we are trying to make it better.

See CHIEF page 23

AFWA awarded for outstanding scientific contributions

By Ms. Jodie Grigsby
AFWA Public Affairs

Col. Charles French, AFWA Commander (center) receives the Theodore Van Karmen award from Air Force Association members during the AFA Technology Expo.

The Air Force Weather Agency, Offutt AFB, Neb., was awarded the Theodore von Karman Award September 13 by the Air Force Association for its outstanding scientific contributions to national defense.

The Air Force Weather Agency was named winner of this prestigious award for superb contributions and support during Kosovo and Bosnia; continuing excellence in implementing a total reengineering; and the transition of the 55th Space Weather Squadron from the Air Force Space Command to AFWA.

The award named for Dr. Theodore von Karman, a Master Scientist and Aero Engineer, was presented to Colonel Charles French, the Commander of Air Force Weather Agency during the Secretary of the Air Force's luncheon held in Washington D.C.

"The men and women of the Air Force Weather Agency work hard every day to successfully accomplish a difficult mission. I accepted the award on their behalf; they truly are the ones who deserve the credit," said French.

AFWA, the largest meteorology computing center in the world, greatly improved flight safety, and mission effectiveness of low-level flights in rough terrain and poor weather. As a result, Air Force Weather achieved initial strike mission forecast accuracy of 93% for the first-day airstrikes during Allied Force.

> The men and women of AFWA not only want to get the job done, they take great pride in doing it right!
>
> *Col. Charles W. French*
> *AFWA Commander*

"Commanders knew how and when weather would affect combat operations because of the success of the entire Air Force Weather team," French said.

The men and women of AFWA truly earned the award for achievements during 1999, with accomplishments like producing over 395,000 weather products every 24 hours. The AFWA team additionally issued 32,000 warnings for 165 locations with 94% accuracy, not only saving human lives but also protecting billions of dollars in resources.

The transition of the 55th Space Weather Squadron to AFWA, with its extensive computing power, will allow more products and improve forecast frequency and accuracy. The greatly improved and expanded weather support for customers ranging from combat forces to National Programs demonstrating AFWA's superior contributions to national defense.

"I am proud of the men and women of the Air Force Weather Agency, not only because they earned this award, but because of their daily commitment to excellence. The men and women of AFWA not only want to get the job done, they take great pride in doing it right—in doing it best," said French.

Prepare Now Annual Weather Awards

Contributed by AF/XOWP

A tad early to start thinking about annual awards? Not so. HQ USAF/XOW will convene the 2000 awards board will convene on 1 March 2001. That seems a long way off— it's not!

Planning and discipline are the keys to crafting an outstanding award package. The planning part includes deciding, early on, to strive to win a particular award and then vectoring your nominee's time, talent, and energy to do those things that support the Air Force operational mission today and help to create a better Air Force for tomorrow.

Discipline includes periodic two-way feedback throughout the year. Don't wait for the awards suspense to start collecting "impacts." Early on, you established a game plan, but do you know how your troops are progressing today? Are they facing roadblocks? Have important changes occurred that require new vectors? Most important, do they know why their work is important? This last question is the "foot stomper."

Board members often tell us that the "bullets" in the award packages lack operational impact. Thus, it's apparent that supervisors often don't know why their people's work is important. The fix? Supervisors must ask questions up the chain to find out, then pass that information back down to the troops. Another "foot stomper." The work we do links directly to Air Force Weather core competencies which, in turn, link to Air Force core competencies. Following this path should help you frame your questions to find the right answers.

Writing the words. We've all rationalized 11th-hour efforts by saying, "I work better under pressure." In reality, the results simply don't cut it. Worse, they don't do justice to the troop's hard work. Good packages take time and lots of re-writes (that "discipline" thing again). Start early and make it a team effort. Seek out your local experts and ask them to critique your drafts. Don't let them off the hook with an easy, "it looks good to me."

Air Force Form 1206, Nomination for Award. Write the nomination in bullet format on the front side only using 12 pitch, Times New Roman font. In case you missed it, "front side only" means one page. There are no points for excess quantity. Put your efforts into creating a hard-hitting, factual one-page nomination.

"Fluff," those adjectives that take up unnecessary space and are the bane of awards board members. Bottomline: minimize it, because awards board members are going to ignore it.

Focusing the nomination on the award: Carefully, read the award descriptions in AFI 36-2807, *Headquarters United States Air Force Deputy Chief of Staff Air and Space Operations Annual Awards Program*, Chapter 14, Weather. The awards board uses the descriptions to score the nomination packages. Believe it or not, we occasionally receive really nifty nominations that are clear mismatches. Also, "shotgunning" nominations (e.g., submitting the same nomination package for more than one award) does not earn style points.

AF/XOWP Air Force Form 1206 suspense: 1 March 2001. We will not accept award packages after that date. We will accept packages by fax, e-mail, classified e-mail, regular mail, FEDEX, carrier pigeon— we don't care. Just get it to AF/XOWP by 1 March 2001. Important point: units submit nominations through their chain of command. These suspenses must be factored into this process too!

More questions? Contact Lt. Col. Dean Corpman, AF/XOWP, DSN 426-4390, comm (703) 696-4390, e-mail charles.corpman@pentagon.af.mil or Tech. Sgt. Terry Greene, AF/XOWP, at DSN 426-4071, commercial (703) 696-4071, or e-mail at carlton.greene@pentagon.af.mil.

JEFX 2000

Weather for Tomorrow's Military

By Paige Rowland & Judi Tull
JEFX Public Affairs

Weather has been both friend and foe to the men and women who have waged war. Gen. Dwight D. Eisenhower was one of the first to leverage military meteorology on the battle field when launching the invasion that would be the turning point during World War II. In that war, and every other military engagement since, military weather personnel have strived to stay one step ahead of the weather.

On today's battle field, war planners require rapid mobility and the immediate exchange of information. To meet those needs, timely and accurate weather information has become crucial. The Joint Weather Impacts System is designed to not only provide weather information for situational awareness, but also to influence and enhance the decision processes that occur throughout the Expeditionary Air Force.

"With JWIS, we can use weather to our advantage rather than react as we have had to do in the past," said Maj. T.J.Borland, Chief of New Technologies, ACC Directorate of Weather.

JWIS will automatically integrate weather databases into Air Force mission planning systems. The interactive, web-based program will support operational and tactical level planning, decision making, mission rehearsal, and training.

"The nice thing about it (JWIS) is that it provides real-world, minute to minute information for planning and execution," according to Col. Bill McGill, Division Chief for the AC2ISRC/A4.

For instance, the JEFX 2000 scenario included simulated enemy chemical attacks on U.S. forces. Real-world weather information from the battle arena was used to produce a Chemical Downwind Message. Using that message, the Joint Warning and Reporting Network rapidly integrated and assessed the impact of the weather information and passed it along to the decision-makers.

"We were able to do all this faster than was ever possible before," said Borland.

JWIS provides weather information 24 hours a day, in six-hour blocks. Since weather information is constantly and readily available, JWARN operators can immediately alert troops to take necessary protective action or avoid an area altogether. Previously, weather information had to be sought out and entered manually, so assessments and alerting could not be done as quickly, according to Tech. Sgt. Scott Durbin, JWARN operator.

"JWIS brings weather information into the hands of the people who need it," said Lt. Col. Michael Hemler, Logistics Branch Chief, AC2ISRC/A4.

JWIS can support geographically separated workcenters requiring specialized weather information. As an example, beddown planners will get different specific information for their purposes than weapons planners would get.

In addition, vital weather information is provided right to the warfighter. JWIS can show pilots, with its infrared target simulations, what a particular target will look like at a given time, and can advise them of the best angle of attack on a target.

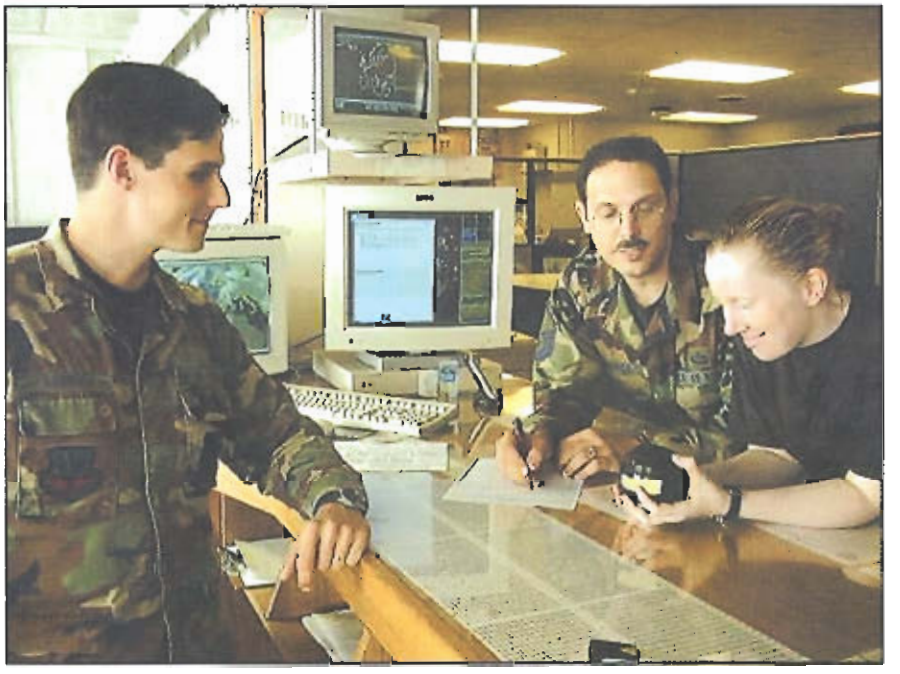
The challenges faced by meteorologist are identifying what decision-makers, planners and operators are looking for and what weather information they need to complete their mission. JWIS puts weather into every phase of a military operation.

"There have been quite a few initiatives that have greatly exceeded our expectations (during JEFX 2000). JWIS is one of them," said McGill.

Leading by Example

By 2nd Lt. Mike Schwan
Wing Weather Officer, RAF Mildenhall

Completely reengineered, the 100th Operations Support Squadron's Combat Weather Team, RAF Mildenhall, United Kingdom is setting the example for other CWTs. Reengineering was a difficult, yet rewarding challenge to the men and women stationed at Mildenhall's CWT during the transition period. Mildenhall may have been the last CWT in USAFE to become realigned under the USAFE Operational Weather Squadron (OWS) at Sembach AB, Germany, but it still completed the process months before scheduled to do so.



Staff Sgt. Scott Lorincz (left), Master Sgt. Joseph Federico (middle), and Senior Airman Kellie White (right) in the middle of the mornings MetCon.

Reengineering came just as Mildenhall's CWT was winding down from supporting Operation Allied Force, during which it supported the majority of the tankers utilized in the operation. This made the process a little more difficult than it could have been.

"We didn't have a lot of time during Kosovo to think about reengineering, yet alone prepare for it," said Master Sgt. Joseph Federico. This put Mildenhall behind the power curve, but it didn't take long for it to catch up.

"Mildenhall is a great model of how a CWT should operate," said Staff Sgt. Janel Hiedebrink, USAFE OWS forecaster.

So how does Mildenhall do it? It all comes down to communication. "Communication is the key to successful CWT operations," said Federico.

"We are the Hub's eyes and ears. If we don't let them know what's happening in the field, they can't complete their mission," said Senior Airman Fernando Ortega.

This type of communication has paid off, as displayed in this years Air Fete (the military's largest air show). The Mildenhall CWTs staff and duty forecasters had daily conversations with the USAFE OWS one week prior to the execution of Air Fete. This enabled the successful prediction of 35-knot crosswinds 5-days out.

"Air Fete was the pinnacle example of the seamless interaction between a CWT and its OWS to accomplish the mission," said Lt. Robin De La Vega.

Reengineering hasn't been the only significant change for Mildenhall's CWT. Mildenhall recently had its legacy FPS-77 weather radar replaced with a new Tactical Weather Radar (TWR). With the Air Force's only weather radar in England, Mildenhall's CWT must keep its eyes open constantly.

"We have to make sure we are on our toes all the time. If any weather is headed our way we not only have

See MILDENHALL page 22

COMBINED EXERCISE ULCHI FOCUS LENS

"IF IT AIN'T RAININ', IT AIN'T TRAININ'!!"

Contributed by the 607th Weather Squadron
Combat Weather Teams

Each year, the US/Republic of Korea (ROK) militaries conduct the world's largest Command Post Exercise, ULCHI FOCUS LENS (UFL), to practice the defense of the Republic of Korea.

The 607th Weather Squadron's Theater Forecast Unit (the Korean Operational Weather Squadron), normally located on Yongsan Army Installation, mounts a massive "bus assault" to their wartime Command Post, adds US Navy, US Marine, and ROK Air Force forecasters and becomes the CINC's Combined METOC Forecast Unit (CMFU).

Combat Weather Teams from Camp Red Cloud, Yongsan, and Camp Humphreys deployed with their Army warfighting customers to six locations across the Korean peninsula.

During CPXs, the CINC directs that we produce a "canned" weather package. METOC impacts are purposely kept benign for most of the exercise in order to allow the staff to fight the fight without weather shutting down operations. This allows the CFC staff to make the most of this short exercise.

Talk about "Owning the Weather! So normally ULCHI FOCUS LENS is a good opportunity for weather warriors to learn about military operations in Korea, and to train our new staff....but it is far from a technical challenge for the meteorologist or technician.

Although the brass can "Own the Weather" during CPXs, they haven't yet got a handle on how to stop the mudslides, flooding and wind damage that accompanies real-world typhoons in Korea.

Although the brass can "Own the Weather" during CPXs, they haven't yet got a handle on how to stop the mudslides, flooding and wind

See KOREAN CPX page 22

Reflections: CWT Supports Command Post Exercise

Observers from the 17th Aviation Brigade Combat Weather Team involved in Combined Exercise Ulchi Focus Lens unload IMETS from the back of a truck.

By 1st Lt. Rob Schlesiger 17th Aviation Brigade Combat Weather Team

While deployed supporting the Ulchi Focus Lens (UFL) 2000, observers from the 17th Aviation Brigade Combat Weather Team provided accurate ceiling and visibility measurements to ensure minimal in-flight surprises for Army helo-crews. Low ceilings and visibility plague the Korean Peninsula during the summer, and forecasting the onset of fog events can be tricky. The Theater Forecast Unit has developed a special knack for this type of forecasting, especially with the proactive help of their forward-deployed CWTs.

The CWT met the UFL mission objectives with success. Our tactical equipment operated smoothly with minimal need to troubleshoot. However, N-TFS laptop performance suffered from hot and humid field conditions. The T-VSAT easily locked on to a signal and experienced little signal degradation even in the midst of heavy precipitation. The CWT also took over as alternate Net Control Station for the QRCT III and were able to effectively communicate with their sister unit at Seoul Air Base.

A morale boost during the exercise included receiving a tactical air-conditioner and the arrival of 'snack food' from the troops in the rear.

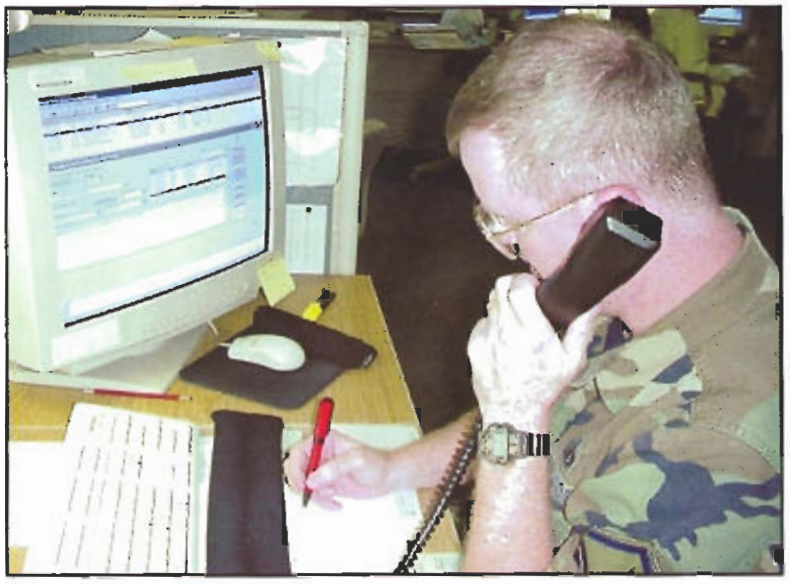
The heavy, persistent rain will be "fondly" remembered, however. Far different from the CWTs arrival during the summer sunshine and heat, the team was soon operating equipment in partially flooded tents. Meeting our mission while keeping the cables off the ground and the leaks away from the laptops became our only concern. Then, we had a new concern – Typhoon Prapiroon was headed for the area of operation.

The forecast of heavy winds persuaded leadership to cancel the remainder of the operation and head home. It is truly amazing to see the speed and teamwork of a unit under pressure from a huge storm. The heavy, rain-soaked tents were torn down and lunch for more than 100 soldiers was prepared, served and packed up within 2 hours. We mobilized and made our way safely home where we watched trees bend to their limits under the 40 knot winds. What an experience!

AFWA Consolidated Help Desk

What We Can Do For Yo

Contributed by HQ AFWA/XO



Master Sgt. Donald Jeter assists a customer on the phone, providing first line support to the field.

Many of you weather troops in the field are familiar with the old AWDS Tech Support function here at AFWA. That function still exists, but its name has changed and it is now part of the AFWA Consolidated Help Desk. But the AFWA Consolidated Help Desk does much more than help with AWDS/AMIS.

AFWA has, and continues to, field new weather support systems as fast as resources have allowed, and often the support tail for these systems has lagged behind. That created a dilemma for you in the operational support world. Where do you go to get your systems problems solved? In an effort to simplify the issue for you in the field, the AFWA Consolidated Help Desk was established to be your point of contact to deal with many of these problems. Our mission is to be your single point of contact to report problems with the AFW support system, and to work and track those problems until they are resolved. AFWA's Consolidated Help Desk consists of Help Desk contractors and the AFWA Operations Control Center (OCC). The contractor Help Desk Technicians are Science Applications International Corporation (SAIC) employees, and they provide the 24 X 7 Help Desk support for the AFWA fielded systems. The OCC consists of AFWA Command Duty Officers (ACDOs) and Air Force 1W0X1A Team Chiefs. The ACDOs and Team Chiefs provide overall shift leadership and add meteorological expertise to the troubleshooting process. The ACDO is AFWA/CC's representative, responsible for day to day, 24 X 7 operations of AFWA support to both external and internal customers. The OCC also takes care of any other calls for assistance from the field such as requests for AFWIN/MAIS passwords, etc.

As the Consolidated Help Desk is configured now, we provide first-line support for AMIS/N-TFS and VSAT/T-VSAT systems. In many cases we are able to directly solve your problem, however, if we cannot, then we refer your trouble ticket to the appropriate contractor or support organization. In most cases, this will be General Dynamics (GD). As a result of funding constraints, GD now has 3 working days to *respond* to an outage. Though GD does make every effort to respond quickly to outages, the 3-day window has contributed to longer outages. The Consolidated Help Desk also provides full support to the MIST system with the capability to refer problems that we cannot solve to a contractor. We continue to track your problem and work with the referral agency to ensure the issue is being worked and we will not close out a trouble ticket without your concurrence that the problem has been fixed. We also provide Point of Contact (POC) support for OPS II and TACMET systems such as TACMET Mod, Tactical Weather Radar (TWR), and TAWS/NOWS, where you call us and we refer your problem to the correct servicing agency.

AFWA has future consolidation initiatives planned to help us meet our goal of being the Command and Control Center for the Air Force Weather Weapon System. Among these initiatives, we plan to further consolidate AFWA operations and systems help desk functions into our

Consolidated Help Desk, develop a 24 X 7 Quality Control Cell to further ensure our products are meeting timeliness and accuracy requirements, and absorb the Det 7 Weather Network Duty Officer function into our Consolidated Help Desk, which will enhance our communications troubleshooting efforts.

Additionally, AFWA's Consolidated Help Desk is about to transition to a new Automated Call Distribution (ACD) system. This new ACD will provide you with options that will direct your call to the right person, not voice mail, but person. We cannot provide you the right kind of support unless we are in direct contact with you, so you will be talking directly with a Help Desk technician or an ACDO or Team Chief.

Consolidated Help Desk numbers and e-mail addresses:

Team Chief (AFWAOPS):
DSN 271-2586
CMCL (402) 294-2586
E-mail:AFWAOPS@afwa.af.mil

AMIS/N-TFS/VSAT:
DSN 271-3244,
CMCL (402) 294-3244,
Email:AMIS@afwa.af.mil

MIST: DSN 271-3246
CMCL (402) 294-3246
Toll free 800-250-1750
E-mail: MIST@afwa.af.mil

OPSII: DSN 271-3245
CMCL (402) 294-3245
E-mail:opsII.helpdesk@afwa.af.mil

Got a problem? Call us at the AFWA Consolidated Help Desk.

New Focus:

COMET Training Materials

By Capt. Travis Steen
AFWA Training Division

AFWA has been working with the Cooperative Program for Operational Meteorology, Education and Training, or COMET, to improve training for Air Force Weather forecasters, and has recently forged a new Memorandum of Agreement, which will reshape the cooperative relationship.

The biggest change is that training materials will now be custom made for AFW forecasters. While our COMET partners develop these materials from their facility in Boulder, Colo., they will work on specific projects coordinated through the AFWA Training Division. Other changes include provisions to allow AFW subject matter experts to work with the COMET staff, and have AFW forecasters involved in the review of COMET material. This new approach will result in new training materials that will benefit AFW forecasters, which is the prime goal of AFWA and our COMET partners.

The first COMET project under this new system is a continuation-training program consisting of training modules packaged in a regional and seasonal format. These modules will provide seasonal continuation-training in each region in an effort to eliminate the need for every unit to completely develop separate programs. The training will be both web and CD-ROM based, and will allow forecasters to work independently. More information will be posted on the DNT training web-site as the development process continues.

Since 1991, COMET has completed numerous training initiatives that are used by the National Weather Service, the Department of Defense, university classrooms and other agencies to enhance meteorological education and training. These training materials take the form of computer-based modules, CD-ROMs, case studies and classroom training.

Since the users of COMET training products come from such a diverse community, it has been a challenge to always meet the training requirements of all these users. In recent years, many AFW forecasters have not used COMET training packages, because they felt the training did not focus on military applications. Others were concerned the training was based on the undergraduate and graduate meteorology course work of NWS forecasters, rather than the technical school and field experience typical of AFW forecasters.

The new relationship between AFWA and COMET was developed to improve support by producing COMET training materials specifically tailored to AFW forecasters.

For information on future projects and current COMET resources, visit the AFWA Training webpage at https://wwwmil.offutt.af.mil/afwadnt/index.htm. Check out the COMET page at http://www.comet.ucar.edu/ for a list of products, links and POCs. Any questions or comments about COMET materials should be directed to HQ AFWA/DNTR at DSN: 271-9531/9646 Comm: (402) 294-9531/9646. While suggestions are always welcomed, please remember to follow protocol for new training requirements and submit them through your higher headquarters.

Air Force, NASA Test In-Flight Weather Notification System

By Capt. Joel Hagan
Test and Engineering Flight

Scenario: *GASSER 65, a KC-135R with a crew of four, takes off from base. Their mission: refuel F-16s tasked to drop bombs on enemy positions. An hour into their flight, the pilot checks the weather display for updated information on the fueling site still two hours ahead. As predicted during the pre-flight weather briefing, large and intense thunderstorms are moving into the refueling area and threatening the mission. Pilots onboard the tanker notice weather in another sector will allow them to refuel the strikers. Permission is granted to change the refueling area. Meanwhile, the F-16s are rerouted to the new area. The fighters rendezvous with the tanker and gets the needed fuel. After the refueling, GASSER 65 heads home and the F-16s proceed on their mission. A successful day — thanks to accurate, timely and easy-to-use weather information delivered to war fighters when and where they need it!*

The 412th Flight Test Squadron is helping NASA test a new system that could improve aircrew situational awareness and reduce weather delays and accidents.

The coordinated effort responds to a call by President Bill Clinton for a five-fold reduction in the rate of fatal aircraft accidents within the decade.

The Aeronautics Safety Investment Strategy Team found weather is a factor in approximately 30 percent of aviation accidents and is responsible for approximately two-thirds of air carrier delays — a $4 billion cost, of which $1.7 billion is considered avoidable. The goal of the weather accident prevention group, a sub-element of the team, is to develop technologies to reduce aviation weather-related accidents.

Highly conceptualized depiction of how weather radar from Boeing's AWIN might be embedded in a moving digital map display of a future C-17 cockpit.

To help meet this goal, two major programs were funded under a NASA research announcement to develop worldwide weather information systems. The 412th Flight Test Squadron agreed to support the Aviation Weather Information Implementation Team, or AWIN, evaluation with its C-135C aircraft, also known as Speckled Trout.

Prior to a flight, Air Force aircrews normally receive weather information an hour or more before takeoff. On an extended sortie, such as those flown by airlift, tanker and bomber aircraft, this weather information becomes increasingly outdated and less useful to the aircrew as the flight progresses. Although aircrews are capable of updating this weather information, this capability is limited based on the route of flight. Unfortunately, even under the best of conditions, aircrews are forced to build a mental picture of the weather ahead of the aircraft based on conversations with air traffic controllers.

The AWIN system is designed to decrease aircrew workload by providing the actual weather picture ahead of the aircraft without forcing them to perform the

See AWIN page 23

WEATHER in USAF Weapon School

By 2nd Lt. Jerome H. Hernandez
57 OSS/OSW, Nellis AFB, Nevada

Editor's note: This excerpt was taken from a memorandum written by 2Lt. Jerome Hernandez and originally appeared in the ACC weather newsletter ***The Barometer****. In his memorandum, he discusses the weather support provided during USAF Weapon School class.*

The weather instructors first educated the students on the weather products available. Then, the instructors moved into weather support for flying operations. Briefings covered weather and Tactical Decision Aids (TDA) information during execution phases of a mission. The weather instructor team found a consolidated weather presentation on a single sheet of paper worked best for the aircrews.

As the weather instructors learned from the aircrews, they tailored the content of the briefs. In the end, they developed platform specific briefing slides to eliminate unnecessary data.

For example, A-10's require D-values, F-15Es do not. Instead, the F-15Es get more high level wind information, up to 30,000 ft. The students appreciated the streamlining. A similar evolution occurred in the area of TDA and Night Vision Goggle Operations Weather Software (NOWS) support. As the instructors learned how each platform approached a target or threat, they were able to anticipate what the aircrew would need for a given mission.

Many times the weather instructors could produce TDA products before the crews even ask for support. Capt. "Stubbs" Anthony mentioned how appreciative he was that the instructors were so proactive. Specific lessons learned during the USAF Weapons School:

HH-60 Weather Briefs: This platform relies heavily on forecasted take-off and enroute weather data. This information is incorporated into their mission planning in order to calculate the aircraft's power performance data. Some of these calculations are very sensitive to temperature forecast, a few degrees adjustment changes the results dramatically. Accurate wind forecasts at the lowest levels are also highly desirable for occasions when "fast rope" tactics are employed.

TAWS/NOWS Target Acquisition Weather Software (TAWS) and Night Vision Goggle Operations Weather Software (NOWS) data is used by crews as mission employment information rather than mission planning data and this is due to the nature of rescue operations, response time is limited. NOWS data is our bread and butter with these crews. I got a ton of good feedback from crews during my recent deployment with the employment phase of the HH-60 Weapons School, they think NOWS is right on the money. I learned that the IR performance data provided by TAWS could use some modifications to better serve the HH-60 community. They want an output from TAWS similar to the output from NOWS. Something based on pilot recognition of targets rather than system detection. They use the FLIR as a visual aid, not in a missile lock-on capacity.

A-10 Weather Briefs: Some of these aircraft have older altimetry systems and rely heavily on D-values for accurate bombing and altitude information. I was told by one pilot, that even if they are flying in a formation with a (newer) GPS equipped A10, they often compared the correction from the new systems with the weather station provided D-value to determine if the new system was reliable on a given day. **TAWS/NOWS** This platform uses both types of data equally. The TAWS output is thoroughly scrutinized by these pilots. Their primary concern is attack heading and "hot-on cold" versus "cold-on-hot". Originally the crews wanted delta-T's, but after viewing plots of target temp and background temp by view direction they soon favored this output type. Since their range times are limited, it is of more value to show directional thermal crossovers rather than diurnal crossovers based on one direction.

F-15E Weather Briefs: These guys want the weather brief as short as possible and are clearly less wx sensitive. They could care less about t/o temps, but are very concerned with accurate wind forecasts from surface to flight level. Of course, this level of concern varies depending on the munitions they may be dropping. **TAWS/NOWS** Similar to A10 comments with the biggest difference being flight levels. These crews often required multiple flight levels, from 500 ft AGL to 25,000 ft AGL.

Clearly, the most important aspect of this whole process was communication with the students. Whether briefing contrails for F-15E's or lunar positions for the A10s, the instructors couldn't tailor support without a working relationship with the customers. Maj. "Toons" Looney said he was really impressed with the "gung-ho" approach to learning about their needs. He said he had never experienced that level of support before.

WEATHER MEETS FIRE

By Ms. Paige Rowland
AFWA Public Affairs

Two weather forecasters deployed Aug. 29 to Quincy, Calif. to support the National Weather Service and firefighters battling flames in that region.

Senior Airman Jorge Evans, of the 19th ASOS, Fort Campbell, Ky. and Airman 1st Class John Radford, with the 21st ASOS, Fort Polk, La. volunteered for the deployment and left at a moments notice.

"From the moment the opportunity was offered to me, even before all the details were worked out, I just knew I wanted to do it," said Evans. "How many people can say they have been to a fire camp and been a part of such a team," Evans added.

The two airmen deployed with a SWO kit consisting of a MOS kit, laptop computer, printer, Air Force forecasting manuals, a T-VSAT with window specific products, and the MARWIN system with balloons and radiosondes.

"A National Weather Service meteorologist showed us the camp and explained our mission with the NWS and the Storrie Fires," said Radford. "We were to provide timely forecasts of winds, temps, and especially relative humidity for the valleys, mid-slope and ridge tops of the areas where the fires were advancing."

The two airmen used the MARWIN system to get temperatures, dew point, pressure and winds that helps the NWS forecast inversions, upper level winds and to verify forecasting models.

"Launching was a real crowd generator," said Evans of launching the rawindsondes. "With the stress of the situation, the sight of something new was a needed distraction for everyone."

After spending a few days in California assisting the NWS, the fires were being contained in that area. On Sept. 3, the weather team was redeployed to the Valley Complex Fires near Hamilton, Mont. to assist there.

"The situation in Montana involved many more acres of land and

conditions were favorable for fires just about every day, call it luck or coincidence, it rained and by the end of the week containment went from 35% to 80%," said Evans.

"The most interesting experience in the Montana camp was that there were firefighters from Canada and Australia and even Army infantry personnel from Fort Campbell, Kentucky," said Radford.

Both airmen learned a great deal about the weather concerns for firefighters. "Humidity greater than 20% hampers the fires progress," said Evans, "winds at the surface and other levels can regenerate the fires, and the daily temperatures for personnel concerns."

"We did our work from 5am to 10pm every day until we left camp on Sept. 9," said Radford.

On Sept. 6, the National Interagency Fire Center reported 86 major fires in 10 states covering more than 1.5 million acres. Since the beginning of the year, there were 75,089 fires, which burned more than 6.6 million acres. The 10-year averages for Sept. 5 are 62,435 fires burning 2.96 million acres.

"The exchange of information between agencies was very interesting," said Evans. "The whole experience is one I will remember for a very long time and the lessons learned will strengthen my abilities to work, along with the new friends I made."

Background photo by John McColgan, Fire Behavior Analyst, Fairbanks, Alaska.

This picture was taken in the Bitterroot National Forest in Montana on August 6, 2000.

Editorial:

Learning from a Disaster

By 2nd Lt. Jennifer Meadows
Wing Weather Officer

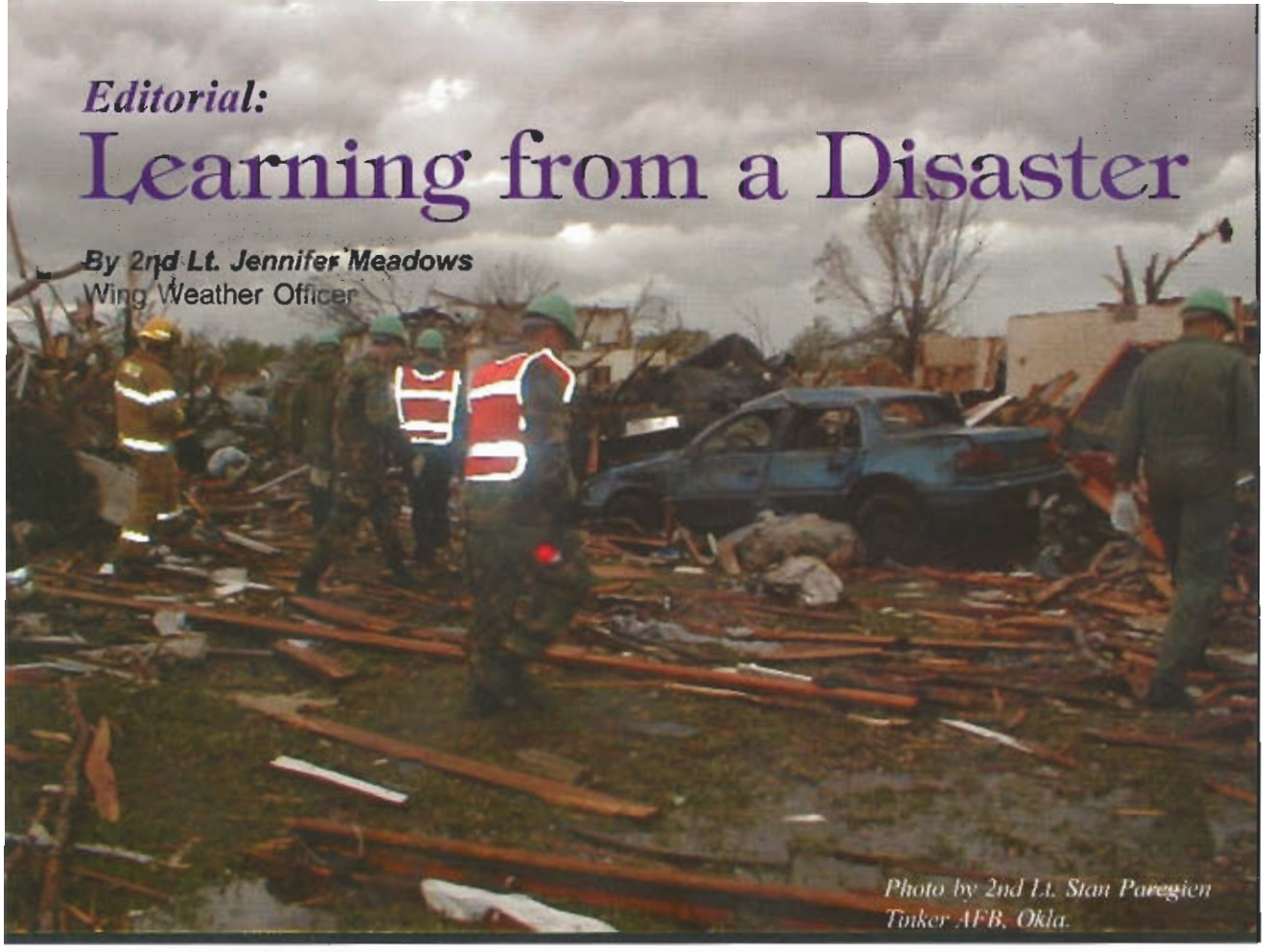


Photo by 2nd Lt. Stan Paregien
Tinker AFB, Okla.

Rescue and recovery efforts began almost immediately following a series of destructive tornadoes which slammed Oklahoma and Kansas on May 3, 1999. At Tinker AFB, Ok., reservists along with their active-duty counterparts joined search-and-rescue teams to search through rubble immediately after the storm passed.

I've often been told that your time as a second lieutenant is spent training, learning, and getting all of your "mistakes" out of the way. For the first ten months I spent on active duty, I was TDY for about half of that time. I attended the Weather Officer Course and the Next Generation Radar (NEXRAD) course at Keesler Air Force Base, Miss.

In the NEXRAD class we learned basic Doppler Theory, how the radar itself operated, and we spent countless hours looking at severe weather events. I didn't realize just how valuable that training would become to me.

I returned from the radar course on April 28, 1999. The morning shift change was uneventful. The mid-shift forecaster, Tech. Sgt. Thompson mentioned that the day was shaping up to be a big storm day for Oklahoma.

I was in charge of the daily briefing to the 552 ACW Commander that morning. As I sat looking at the current Military Weather Advisory (MWA) for that day, I asked Master Sgt. Brian Nesius if he thought I should brief the severity indicated by the terminal aerodrome forecast (TAF), or follow the MWA, which was slightly different. He advised me to follow the TAF put out by the forecaster, which indicated severe weather to include tornadic storms. As I've already learned in my short time on active duty, listen to your NCOs!

It was a typically busy day at the weather station for me. I was still learning and spent a lot of my time observing the many functions of the station, and actively participating in as many functions as I could. I didn't sit down at my computer until later that afternoon. When I did, I glanced at the radar and noticed a small echo-return that was about 100 miles to our

southwest. In a matter of minutes, the radar estimated that the top of this storm cell went from 20 kft to over 55 kft.

Other storm cells were popping up all over the southwestern part of the state. I remember the restlessness I felt as I stared in awe at the signatures on the radar.

All of the storms were moving for the most part to the northeast. Their track had the initial storm hitting Tinker within the next few hours.

It was sometime after that when I became acquainted with the base commander, who had heard of the large storms heading for Tinker. I was standing in front of the radar when I glanced up and saw the commander who had come to our office for information.

The weather flight commander explained the grave situation to the commander. He asked us to get the people in our building to the shelter as quickly as possible.

I found myself in charge of approximately 70 people crammed inside the protective shelter. Things were so tense that I don't recall ever being nervous, but I do remember the pounding of my heart.

For the next thirty minutes, I made my way between the weather flight and the shelter relaying information from the news reports and the radar to those in the shelter including the base commander, who had also joined us. Twice, I ventured onto the tarmac to see the 1 ¾" hail. I caught several glimpses of the velocities in the storm, and I was amazed at how clear the rotation was. As a young--weather officer I was curiously excited to be witness to this horrible act of nature.

At 7:36pm, the F5 tornado was within five miles of the base.

Watching the news and hearing the storm spotters on the radio, it was clear that Moore had been severely damaged and that part of Del City and Midwest City had taken damage as well. When it was safe, I decided it was time to leave the shelter to check on our homes and loved ones.

By the time I made it home that night I was completely exhausted. I think I was still in shock by all that had happened. I had only seen a few pictures of the damage, and there was no power on base so I couldn't watch the news. My husband and I walked around our home on base and saw all the debris over our yard and the branches broken off of the trees. I tried to get some sleep that night, but the constant pound of storms made it nearly impossible to get any rest.

I found myself in charge of approximately 70 people crammed inside the protective shelter. Things were so tense that I don't recall ever being nervous, but I do remember the pounding of my heart.

I don't know the exact number of families who lost their homes, but a lady in my husband's flight survived while her entire house blew apart around her. I am amazed that people actually survived some of the homes I saw after the tornado.

The storm was on the ground for an extended amount of time and there was plenty of opportunity to warn the base population. The people we had on duty that night (and those who stayed to help out) did an absolutely outstanding job. I consider myself a very lucky person to work with such fine weather people. I can honestly say I hope I never have to go through it again.

Combat Weathermen Watching Winds Over Volcano

By Tech. Sgt. Ginger Schreitmueller
Air Force Special Operations Command

U.S. Air Force Special Operations Command combat weathermen provide warfighting commanders an assessment of the environment on and above a battlefield. Their specialized forecasting and observing skills supply vital weather data that can make or break an operation's success.

Two combat weathermen from Detachment 5, 10th Combat Weather Squadron, Fort Bragg, N.C., are taking their unique expertise to the field, but this time they're supplying a different customer with this vital weather data.

Senior Airman John Galdamez and Senior Airman T.J. Sopher are deployed to Ecuador to keep an eye on the skies above an active volcano in the Andes. The volcano has been rumbling since early October, sending ash clouds over this South American country. The Pichincha Volcano looms over Quito, the capital of Ecuador, home to more than one million people.

Scientists from the Ecuadorian Geophysical Institute believe the minor eruptions, earthquakes and tremors indicate a manifestation of rising lava underground, and that an eruption could take place in days. The government of Ecuador sought international support in monitoring the activities, especially the profiling of high-altitude winds above the volcano.

"Our mission is to take atmospheric readings of the winds above the volcano," said Galdamez. "The information will be passed to Ecuadorian officials, who will use it to help predict the pattern and direction of ash fall from the volcanoes."

Using a portable upper-air measuring system known as the Marwin, the combat weather team will send helium-filled balloons up to 10 miles above the volcano. Attached to the balloons is an instrument sensor package that uses ultra-high frequency radio, in conjunction with Geostationary Satellite Positioning satellites, to transmit meteorological data — including winds — back to the combat weathermen below. The team will relay the data collected to scientists at the institute and the country's disaster management team for input into their threat models.

Though similar systems exist in the military and civilian sectors, the combat weather team's system has an advantage — it's portable.

"The equipment is small and can be carried by a single individual, making it easily deployable," said Sopher. "It's a highly reliable system, and will provide the needed data for this effort. The Ecuadorian government will be able to use the information to predict ash fall, as well as help steer civilian aircraft out of any ash clouds."

The combat weather team will be deployed for about 30 days, monitoring the high-altitude winds twice daily. Along with the ash and fumes from the rumbling volcano, the team will also have to battle the altitude itself — Pichincha towers 16,000 feet above sea level.

Being close to the action is nothing new to the combat weathermen, and according to Master Sgt. Ralph Ley, from the AFSOC directorate of operations weather, their presence can make a difference if the volcano erupts.

"It's common for these teams to be deployed in remote locations. Because of their outstanding physical condition, they are more easily able to adapt and work in the higher elevations," he said. "(The information they provide) can save lives and millions of dollars in property damage."

Pichincha has been dormant since it last erupted in 1660 and blanketed Quito in about one foot of ash. It is one of nine active volcanoes in the Andes.

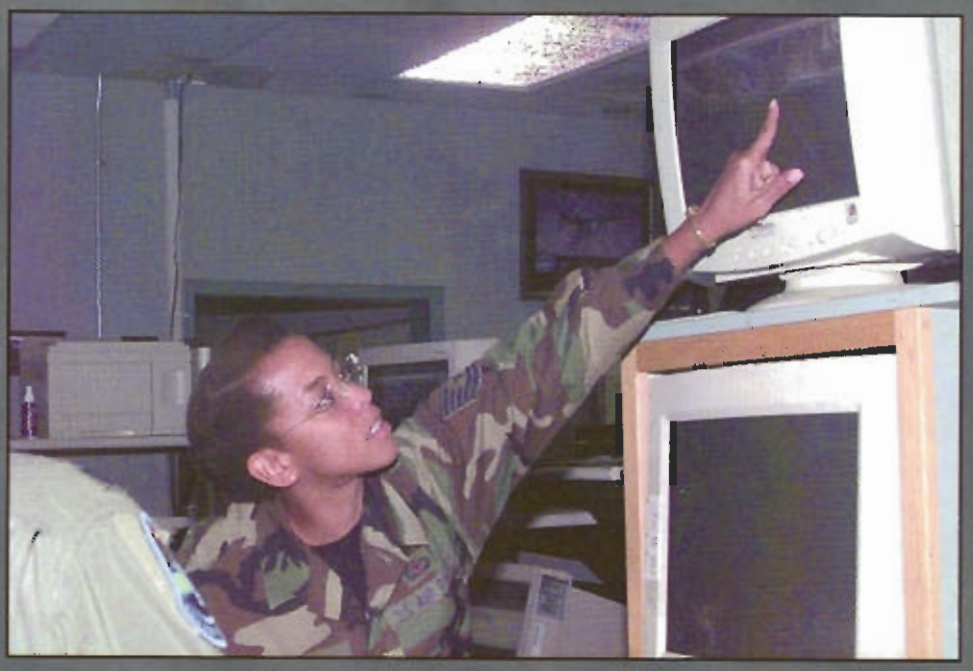
The 10th Combat Weather Squadron, a member of the 720th Special Tactics Group, has five detachments and one operating location providing combat weather operations for Army Special Operations Command units and military operations around the world. (Courtesy of Night Flyer News Service)

Weather Channel Meteorologist Trains at Ellsworth

By Airman Jennifer A. Johnson
28th Bomb Wing Public Affairs

If you've watched the Weather Channel recently you may have noticed a missing person during the weekend evening forecasts.

That's because Tech. Sgt. Lisa Mozer, an on-camera meteorologist at the Weather Channel and an Air Force Reservist, spent Aug. 14 to 25 completing her active-duty training at the 28th Operations Support Squadron Weather Flight.



Technical Sgt. Lisa Mozer an Air Force Reservist, 28th Operations Support Squadron Weather Flight, receives active-duty training.

Mozer said she considers herself fortunate to come to Ellsworth because it provides her with a closer look at the unique weather in the northern plains.

"One of my biggest challenges as a forecaster at Ellsworth is the wind," she said. "The geography in South Dakota takes some getting used to because the mountains to the west and the plains to the east provide rapid increases and decreases in the wind speed and temperature."

Maj. Randall Bass, 28th OSS Weather Flight commander, said the knowledge Mozer gained about the Black Hills and its weather patterns will transfer well to her job at the Weather Channel.

Mozer is an on-camera meteorologist at the Weather Channel.

"The training she received here will help her better understand how the Black Hills affect the weather in this part of the country," the major said. "She definitely learned more about this area, which she'll use when she's on the air."

Mozer said the training will not only help her understand the weather patterns in the Black Hills, but will keep her competitive in forecasting. "Because forecasting weather is a science that will continue to improve and be modified, people have to continue their education to stay competitive and flexible."

Mozer added that both her jobs provide unique and challenging opportunities to perfect and hone her weather forecasting skills.

"Broadcasting for the general public is very different than briefing a pilot who has a mission that's going to take him half-way across the country," she said. "My training in the Air Force is strictly customer oriented. Our biggest customer here is the B-1B, so when I'm here that's my main mission and what I focus on." (Courtesy of ACC News Service)

KOREAN CPX cont. from page 10

damage that accompanies real-world typhoons in Korea. Twice during UFL, typhoons threatened the field sites and installations of Korea.

During the first week, the CMFU issued a severe weather "heads-up" to CFC senior leaders over 96 hours in advance of the start of heavy precipitation. In all, in spite of over 20 inches of rainfall over a three-day period, there was no loss of life, or preventable loss of property. Early during the next week, typhoon Prapiroon, the strongest typhoon to hit Korea in 22 years, began its slow movement towards Korea. Three days in advance of landfall, the CMFU got the word out to senior leaders.

The exercise was terminated a day early and field units allowed to break down and redeploy to garrison based on the wind forecast (which turned out to be right on the money). At all levels, Combat Weather Teams worked closely with their supported commanders to ensure that mission-limiting weather was anticipated and exploited, and that the safety of soldiers and resource protection of tens of millions of dollars of equipment was ensured.

Another superb effort by the officers, NCOs, and Airmen weather warriors supporting Combined and US Army operations in Korea!

Staff Sgt. Mike Pietrzak uses N-TFS to complete mission execution forecast (MEF) in 6 Cav Bde IMETS.

MILDENHALL cont. from page 9

to alert the Hub; we also have to notify our sister CWT here in East Anglia," said Senior Airman Eric Bauer, forecaster.

The CWT at Mildenhall not only supports its host wing of KC-135s, but also is kept busy supporting Mildenhall's tenant units. These units consist of a Navy detachment of C-12s, the 95th Reconnaissance Squadron with RC-135s, and staff support for the 3rd Air Force. Reengineering has allowed Mildenhall's CWT the time it needs to really concentrate on each of its customer's missions which are quite diverse. This extra time shows in the quality of support Mildenhall's customers receive.

We are the Hub's eyes and ears. If we don't let them know what's happening in the field, they can't complete their mission.

--Senior Airman Fernando Ortega

"The support we get from the weather folks at Mildenhall has never been better and is second to none," said Navy Lt. Theodore Prince.

It may look like Mildenhall has completed the reengineering process, but they believe the process has just begun. Even if the CWT at Mildenhall can never truly complete the reengineering process, it still is setting the example for those CWTs who are about to begin.

"You can never complete the process (of reengineering) because the whole concept is to continually evolve and discover new ways to better serve your customers," said Federico.

CHIEF cont. from page 5

Explain their Air Force benefits (available on the AFPC website), Air Force and Weather histories and their patriotic duty to serve their country.

The most important thing you control training. If your unit does not train to the levels indicated in the Specialty Training Standard (STS) everyone suffers. Cutting corners on training to obtain relief is not the answer to fixing manning problems. People do not feel comfortable at their job when trained poorly. Tradition shows us they would separate from the uncomfortable arena. Also, use them in the areas trained! At the same time you're trying to keep the Forecaster Assistants' forecasting skills from getting rusty, be sure you don't let the experienced technicians' observing skills do the same. Brush up on the seasonal skills. Challenge your people to continue learning!

As you can see, it takes teamwork on everyone's part and time to get the manpower problems fixed. It is hard work, long hours, and dedication. We must continue to provide this support during this transition stage. However, there is light at the tunnel's end. In a short time we can see relief with experienced weather technicians that will exceed all our standards. Plan to be part of the team!

AWIN cont. from page 14

mental gymnastics required to synthesize such a picture based on information gathered over the radio.

In real-time, the AWIN system uplinks weather information, similar to data an aircrew would receive from a ground-based weather squadron, to an aircraft, and continues to update this information on a regular basis.

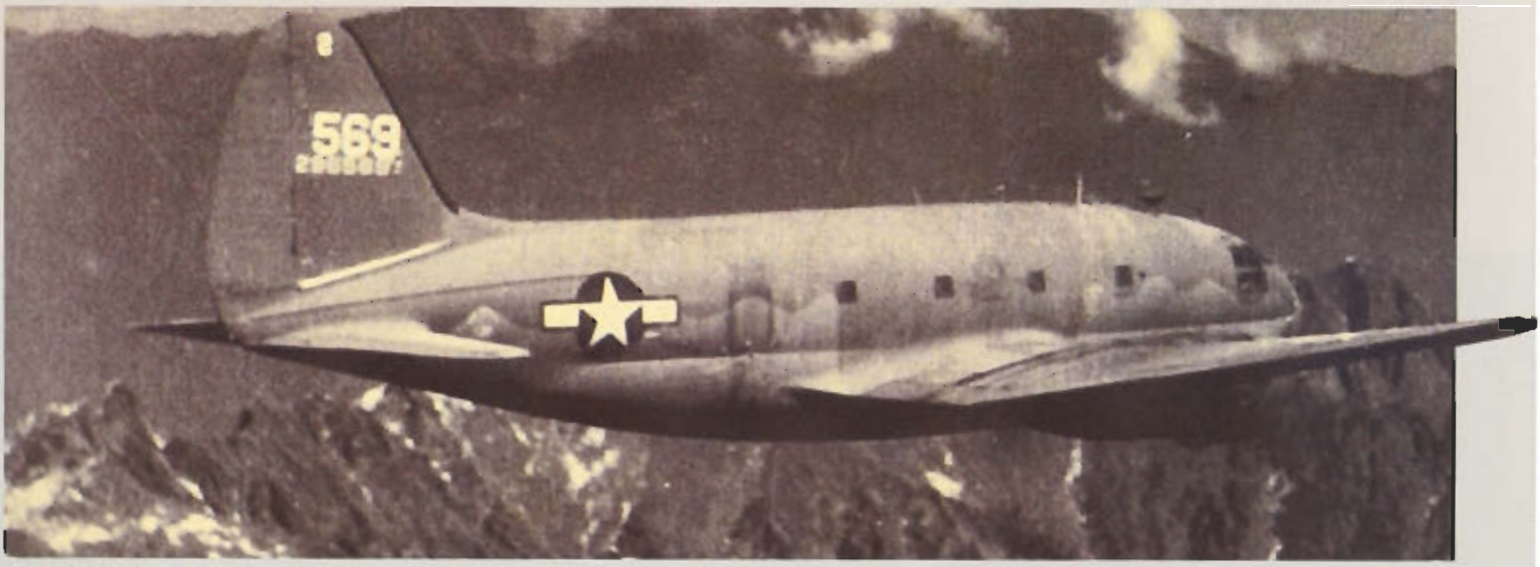
Private companies or government organizations such as the Air Force Weather Agency gather basic weather information such as temperature, pressure and dew point. The weather agency develops weather products such as composite radar images, lightening strikes and satellite images. These weather products are sent to a ground station which then uplinks the information to an International Maritime Satellite, or INMARSAT, commercial satellite system. The weather products are then downlinked to the Speckled Trout and displayed on a laptop computer located on the flight deck.

The 412th is working closely with the Air Force Flight Standards Agency, which, as a participating test organization, is supporting the 412th FLTS AWIN test program with an NC-21A aircraft and aircrew.

Along with acting as the responsible test organization for the AWIN program, the 412th will also install the AWIN system aboard the NC-21A aircraft. The Speckled Trout and the NC-21A will fly a combination of continental U.S. and overseas flight test sorties along standard commercial flight routes, to evaluate AWIN weather products.

412th FLTS' Speckled Trout aircraft has weather graphics displayed in its cockpit during flight tests supporting NASA's Aviation Safety Program, Weather Accident Prevention project.

Did You Know?



By Mr. John Murphy
AFWA History Office

The following excerpts cover events of the 10th Weather Squadron during the China, Burma, India Theater.

The "Hump" was the term used for the high jutting peaks of the treacherous Himalayas. According to historical reports these mountains bring about, "some of the worst weather in the world." The reports also noted, "the peaks produce unexpected wind currents with unpredictable up and down drafts, turbulence and the dreaded icing while heavy cumulous are apt to and do swing in at any moment and hide the solid rock pile." North Burma was at this time largely Japanese held and aircraft patrols took off with regularity from fighter strips to shoot down transports flying the "Hump" without adequate fighter support. As a consequence most of the Hump crossings were done at night, however these night flights over the Himalayas did not exactly lessen the dangers.

By 1942 flight over the "Hump" had to be made far to the north, the most dangerous and treacherous portion of the area because there was a Japanese fighter base in Northern Burma. The "Hump" was unknown territory to most pilots, leaving the Allied forecasters as the only ones in the world with first-hand knowledge of the route. This knowledge made it critical for them to remain at their stations in Northern Assam and provide weather information to those units keeping a stream of supplies flowing into China.

With the Assam valley stations opening up, Col. Richard E. Ellsworth, commander of the 10th Weather Squadron, saw the first big need for weather services would be at these new bases. The colonel's name is easily recognizable to Air Force personnel of today, but not necessarily to our sister services. Ellsworth AFB, located in Rapid City, South Dakota is named after the colonel, and is the only active air base named after a weather person.

His contributions during World War II came not only as the commander of the 10th Weather Squadron, but because of his expertise of the region. He put this knowledge to use while perfecting night flying techniques across the treacherous Himalayas. Ellsworth went on to the rank of Brigadier General and was killed while still on active duty in 1953.

During this time, Chabua was one of the first weather stations put in operation, with Capt. Carl E. Wagner as the station weather officer. Although the captain was not the

Col. Richard E. Ellsworth, Air Corps Regional Control Officer, 10th Weather Region.

best forecaster, he was considered one of the best weather officers in the region.

His ability to sell himself, as well as his weather reports, proved to pilots that the weather station was there for the sole purpose of helping them. Soon there were weather detachments located at Karachi, Agra, Delhi, Allahabad, Bangalore, and Dinjan in India, plus one in Kunming, China.

Initially there were few weather detachments in the region, so manning was low. After operations were expanded from India and Burma into numerous areas throughout China, manning jumped to over 500 people. With units spread throughout the theater, communications became critical. This part of the mission was handled partly by Army Airway Communications (AACS), and partly by India's land lines and telegraph system. The problem and difficulties were numerous, and it was said "that India's post and telegraph system would never put Western Union out of business."

As the mission increased in size, so did the number of weather stations in the region. While some of these stations were in "good" locations, some of them were put in places that "were not too pleasant." With an increase in activity over the "Hump" and the absolute lack of reporting stations along the route, it was decided to set up reporting units in the Naga Hills or northern Burma and have them provide hourly weather reports. These reports would prove invaluable for the pilots who relied on cloud cover to hide from the Japanese Zeros.

A few weather men were sent to each of these reporting stations, some of which were located along Japanese lines, where the risk of detection was constant, and their food supplies had to be airdropped in. In some parts, the loyalty of the hillsmen was doubtful, with Allied flyers being turned over to the side offering the most money.

Another group had a posting along the Naga Hills in the middle "head hunting territory." According to reports, one morning a head hunting tribe of Nagas had stopped by in a friendly mood asking the weather men if they would like to join the tribesmen on a head hunting expedition, but they declined. Hours later the tribesmen returned carrying a number of "trophies" aloft on spears. Having seen this, the weathermen requested a shipment of machine guns and grenades just in case the next visit from the tribesmen was "in the spirit of business, rather than a social visit."

As the war continued, forecasters were not only providing forecast for the transport aircraft, but for the B-29 bombing missions taking place throughout the Pacific region. As the war was winding down, forecasts were being made to such units as the Tenth Air Force, the Eastern Air Command, and the British Fourteenth Army in Burma. Analysis were being made twice daily for the area encompassing Madagascar, Australia, the Philippines, Southern Tibet and Turkey. Tactical operations came to a close with the Rangoon invasion, and the India Weather Central was inactivated in the latter days of May 1945.

AMC

NAME: TSgt (sel) Valerie A. Smith
UNIT: 92 OSS/OSW, Fairchild AFB WA....home of the Warfightin' Weather Wizards
JOB TITLE: Acting Chief, Weather Station Operations
YEARS IN SERVICE: 12
HOMETOWN: Keystone Heights, FL
HOBBIES: Reading, Hiking and Traveling
REASON JOINED THE AIR FORCE: To see the world
PERSONAL MOTTO: "Use what talents you possess. The woods would be very silent if no birds sang except those that sang best." and "Whatever you do, don't congratulate yourself too much or berate yourself either. Your choices are half chance, so are everybody else's."
MOST MEMORABLE AIR FORCE WEATHER EXPERIENCE: My Army Support duties at Camp Humphreys, Korea and the tornado we got during my first day on the job—the 1st ever recorded in Korea. Also winning the 1999 Pierce Award for AMC and at AF level...I didn't see it coming.

WEATHER WARRIORS

AFMC

NAME: SSgt Jennifer J. Shields
UNIT: 75 OSS/OSW, Hill AFB, Utah
JOB TITLE: Weather Forecaster
YEARS IN SERVICE: Eight
HOMETOWN: Mount Clemens, Michigan
FAMILY STATUS: Single
HOBBIES: Softball, Tennis and Volleyball
REASON JOINED THE AIR FORCE: Travel and education
PERSONAL MOTTO: "You screw up, and I'll poke you in the eye!"
MOST MEMORABLE AIR FORCE WEATHER EXPERIENCE: My TDY to Al Jaber supporting flying customers conducting combat operations is most memorable.

Our Great Nation Understands, Appreciates Sacrifices We Make

By Lt. Col. Dave Henderson
384th Air Refueling Squadron Director of Operations

Recently, I attended a military funeral and during the service I reflected. Why is it, 40 years after a veteran has left the military, people so strongly remember that this individual served his country?

I can remember when World War II veterans from my local community died, and for each one there is as much in their obituary about their military service as for the other 60 or more years of their life. How can it be that these people are remembered so much for what ultimately was a relatively few years of their life?

I think the answer is sacrifice. By the very fact they were veterans, these people gave some period of their lives for the good of this nation. They didn't all give the same. Some answered the call during a time of crisis, while others spent an entire career in the military. Some maintained, some operated, some administered. Some supplied the bullets to the front, some fired the bullets across the front, some didn't return from the front. All answered the call.

Consider these honored veterans, and think about what you are doing now. Perhaps you think you simply go to the office or the flightline and put in your 12 hours. Or perhaps you look ahead to the day when you can make the transition back to civilian life. Either way, don't miss the here and now.

Each day, we all live an adventure. Sure, it may sound like a commercial, but think about it. How many of your old friends from back home are dealing with millions of dollars worth of equipment every day? How many of them can say if they don't get their job done exactly right, someone else may pay the price with their life? And who among them can say that what they do provides security for an entire country? How many of them can say they lived away from their loved ones for months on end because it was important to the well being of the nation? And how many of your peers do you believe have thought about the possibility they could give their life in the course of doing their job?

There are some. Certainly police and firefighters provide our communities with protection and certainly they risk their lives, but military members do this on the grand scale — for the whole.

Someone actually does think about your sacrifices — our grateful nation that so readily honors our veterans. It is precisely because many people have pondered these sacrifices that veterans are remembered so much for their service, even 40 or 50 years after they have left active duty. At the military funeral I was thinking, here lies a man who put his life on the line to protect us all. Was he any braver than the rest? Maybe, maybe not. But when this country had a tough job to do, there is no doubt that he stood and said, "I'll do it."

Whether you realize it or not, you are that person, right now, right here. You have said, "I'll go to the far corners of the earth. I'll endure long separations from my loved ones." You ask little in return considering what you give this nation.

To you it may seem like any other job, but your country will remember your sacrifices for all of your days. You have, in essence, stood and said, I'll do it.

Air Force Weather SALUTES

AIR FORCE WEATHER COLONEL SELECTS

William F. Burnette, *J-38/ROD, Pentagon, Washington D.C.*

Frederick C. Wirsing, *89th Group/IG, Keflavik, Iceland*

John M. Lanicci, *Air War College, Maxwell AFB, Ala.*

Mark J. Welshinger, *OFCM, Washington D.C.*

David A. Smarsh, *Deputy for Federal and National Programs, Washington DC*

Billy G. Davis, *28th OWS/CC, Shaw AFB, S.C.*

MEDALS

AIR FORCE MERITORIOUS SERVICE MEDAL
Master Sgt. Donald P. Baldauf, *HQ AMC/DOW, Scott AFB, Ill.*
Tech. Sgt Robert F. Warren, *146 WF, Pittsburgh, Pa.*

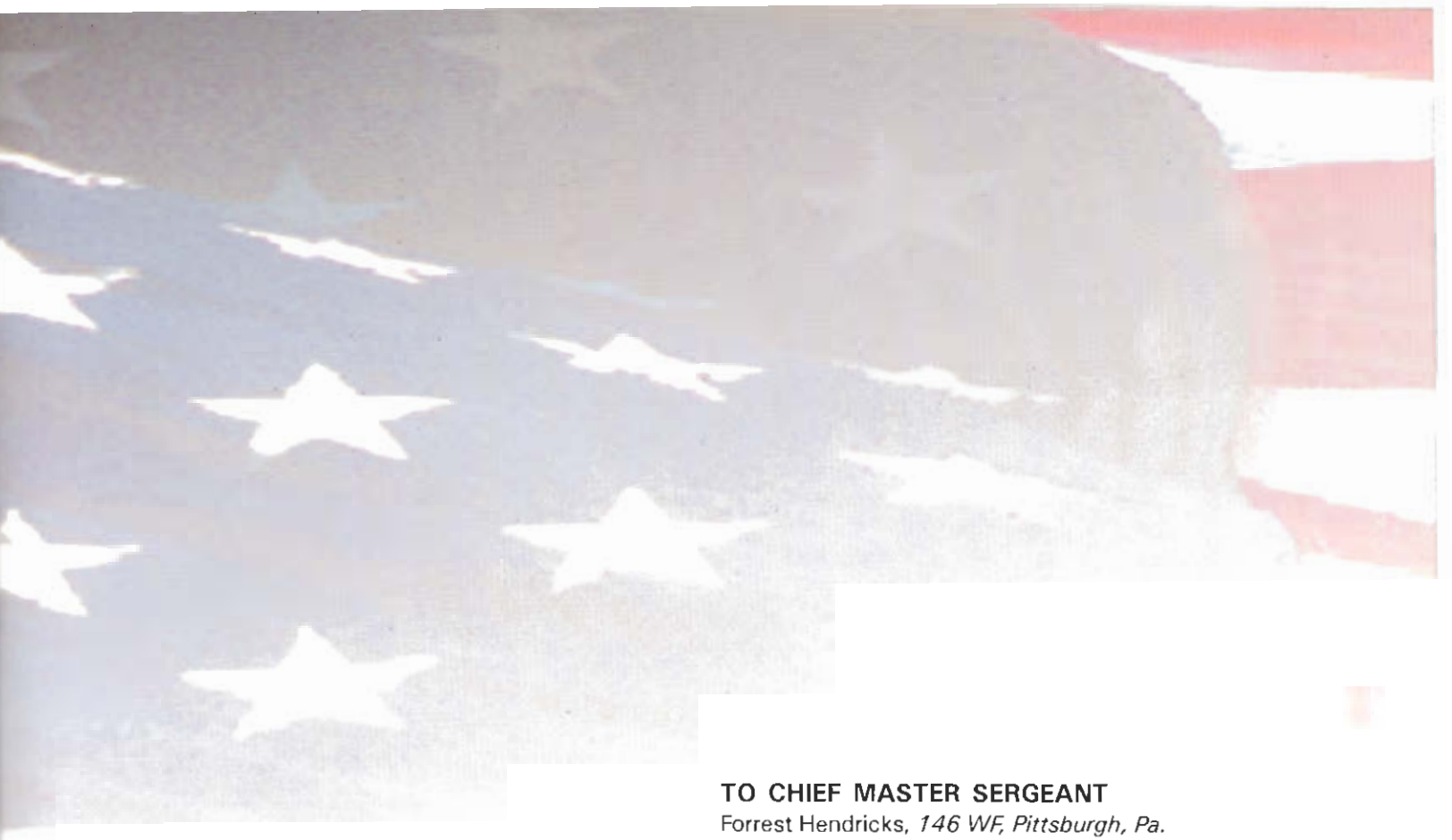
AIR FORCE COMMENDATION MEDAL
Tech. Sgt. Paul D. Bravard, *207 WF, Indianapolis, Ind.*
Staff Sgt. Kyle Sutherland, *110 WF, St Louis, Mo.*

JOINT SERVICE COMMENDATION MEDAL
Capt. J. Bryan Mackey, *Weather Training Flight, Keesler AFB, Miss.*

JOINT MERITORIOUS UNIT AWARD
Tech. Sgt. John C. Tunney, *146 WF, Pittsburgh, Pa.*

AIR RESERVE FORCES MERITORIOUS SERVICE MEDAL
Master Sgt. David L. Tucker II, *146 WF, Pittsburgh, Pa. (3RD OLC)*

AIR FORCE LONGEVITY SERVICE AWARD
Staff Sgt. Shawn E. Gabel, *146 WF, Pittsburgh, Pa.*



PENNSYLVANIA MERITORIOUS SERVICE MEDAL
Tech. Sgt Robert F. Warren, *146 WF, Pittsburgh,Pa.*

PENNSYLVANIA COMMENDATION MEDAL
2Lt Valentina McNamara, *146 WF, Pittsburgh, Pa.*

PENNSYLVANIA GENERAL WHITE MEDAL
Master Sgt. James S.Malia, *146 WF, Pittsburgh, Pa.*

PENNSYLVANIA GENERAL STEWART MEDAL
Staff Sgt. Shawn E. Gabel, *146 WF, Pittsburgh, Pa.*
Senior Airman Michael T. Gaither, *146 WF, Pittsburgh, Pa.*

GOOD CONDUCT MEDAL
Senior Airman Daniel M. Bigley
Senior Airman Jennie E. Ravitch
Senior Airman Phat Sahn

ANG PROMOTIONS

TO MAJOR
Stephen D. Krage, 204 WF, McGuire AFB, N.J.

TO CAPTAIN
John H. Waltbillig, *127 WF Topeka, Kan.*

TO 1ST LIEUTENANT
Martin T. Stickney, *208 WF Minneapolis, Minn.*

TO CHIEF MASTER SERGEANT
Forrest Hendricks, *146 WF, Pittsburgh, Pa.*

TO MASTER SERGEANT
Mary R. Whitney, *154 WF Little Rock AFB, Ark.*

TO TECHNICAL SERGEANT
Robert C. Bohlin Jr., *199 WF Wheeler AAF, Hawaii*
Dean P. Chapman, *123 WF Portland, Ore.*
Norman S. Keith, *159 WF Camp Blanding, Fla.*
James J. Profita, *200 WF, Richmond, Va.*
Jeffrey A. Salesman, *113 WF, Terre Haute, Ind.*

TO STAFF SERGEANT
Carrie A. McKinnon, *156 WF Charlotte N.C.*
John F. Spangenberg, *126 WF, Milwaukee, Wis.*
Jason A.Wilfong, *116 WF Camp Murray, Wash.*
Paul A.Wilkerson, *154 WF, Little Rock AFB, Ark.*

TO SENIOR AIRMAN
David J. Bauer, *208 WF, Minneapolis, Minn.*
Stephen F. Burke, 202 WF Otis ANGB, Mass.
Mark J. Gibson, *123 WF Portland, Ore.*
Earl D. Jenkins III, *156 WF, Charlotte, N.C.*
Megan I. Lumsden , *202 WF Otis ANGB, Mass.*

RETIREMENT

Master Sgt. Donald P. Baldauf, *HQ AMC/DOW, Scott AFB, Ill.*
Technical Sgt. Don Carson, *Air Force Combat Weather Center, Hurlburt Field, Fla.*

AIR FORCE WEATHER STAFF SERGEANT SELECTEES

-A-

Adams, Gregory D., *Charleston, S.C.*
Ahern, Shannon B., *Shaw AFB, S.C.*
Aragon, Brian T., *Edwards AFB, Calif.*
Arbogast, Jeffrey G., *Minot AFB, N.D.*
Avery, Sandy R., *Scott AFB, Ill.*

-B-

Bachand, Keith E., *Kunsan, Korea*
Bailie, Nathan J., *Maxwell AFB, Ala.*
Bargado, Mark D., *Keesler AFB, Miss.*
Barnes, Malik J., *Wheeler AFB, Hawaii*
Barq, Brandy M., *Edwards AFB, Calif.*
Beckmann, Jeremiah, *Grand Forks N.D.*
Bell, Christina M., *Yongsan, Korea*
Beyer, Jason C., *Fort Bragg, N.C.*
Bigata, Richelle R., *Nellis AFB, Nev.*
Bishop, Brian D., *Misawa, Japan*
Blackwell, Lisa M., *Sembach, Germany*
Blanchard, Katrina, *Patrick AFB, Fla.*
Bontea, Sirius, *Fort Lewis, Wash.*
Boyd, Matthew A., *Eglin AFB, Fla.*
Brandis, Michelle L., *Fort Hood, Texas*
Bridges, Melissa A., *Dyess AFB, Texas*
Broadway, Jo Anna, *Seymour Johnson AFB, N.C.*
Brooks, Larry L., *Fort Bragg, N.C.*
Brown, Deidra L., *Red Cloud, Korea*
Brown, Jana L., Keesler AFB, Miss.
Browning, Thomas S., *Fairchild AFB, Wash.*
Burch, Brian A., *Fort Rucker, Ala.*

-C-

Cardenas, Richard N., *Offutt AFB, Neb.*
Carlson, Bryan L., *Offutt AFB, Neb.*
Carnes, Bryan D., *Fort Bragg, N.C.*
Ciuro, Daniel, *Keesler AFB, Miss.*
Clark, Spencer T., *Travis AFB, Calif.*
Colondehayes, Fany, *Mcguire AFB, N.J.*
Combs, Cara N., *Offutt AFB, Neb.*
Conner, Burton C. II, *Travis AFB, Calif.*
Cook, Timothy F., *Tinker AFB, Okla.*
Cornett, Westley B., *Fort Bragg, N.C.*
Eisler, David L., *Aviano, Italy*
Evans, Lori L., *Fort Rucker, Ala.*
Everett, William A., *Grand Forks, N.D.*
Ey, Jared C., *Vandenberg AFB, Calif.*

-F-

Faulds, Gina Ellen, *Fort Hood, Texas.*
Fisher, Steven L. Jr., *Offutt AFB, Neb.*
Frickel, Brenda S., *Dover AFB, Del.*
Frost, Thomas J., *Shaw AFB, S.C.*
Furtado, Christopher, *Hurlburt Field, Fla.*

-G-

Gameon, Marty O., *Nellis AFB, Nev.*
Geyer, John W., *Travis AFB, Calif.*
Gideons, Edwin P., *Keesler AFB, Miss.*
Gilbert, Christopher, *Keesler AFB, Miss.*
Gordon, Beven R., *Vandenberg AFB, Calif.*
Gosney, Derek E., *Shaw AFB, S.C.*
Graves, Brenda K., *Langley AFB, Va.*
Gray, Asha M., *Ramstein, Germany*
Gray, Patrick D., *Luke AFB, Ariz.*
Grega, Jennifer L., *Davis Monthan AFB, Ariz.*

-H-

Hagan, Julia F., *Keesler AFB, Miss.*
Hale, Stephen C., *Charleston, S.C.*
Harding, James P., *Fort Campbell, Ky.*
Harper, Christopher, *Offutt AFB, Neb.*
Harris, Leah E., *Keesler AFB, Miss.*
Hart, Terri D., *Keesler AFB, Miss.*
Harvilla, Stephen R., *Elmendorf AFB, Ark.*
Hauser, Jeromy L., *Tinker AFB, Okla.*
Helmer, Chad L., *Charleston, S.C.*
Hendrickson, Mark A., *Grand Forks, N.D.*
Herbst, Laura J., *Fort Campbell Ky.*
Herkamp, Paul A., *Offutt AFB, Neb.*
Herndon, Matthew R., *Fort Campbell Ky.*
Hill, Mathew B., *Hill AFB, Utah*
Hinton, Robert L., *Cannon AFB, N.M.*
Hughes, Michael E., *Nellis AFB, Nev.*
Hymel, Leslie E., *Illesheim, Germany*

-J-

Jaime, Gerardo J., *Tyndall AFB, Fla.*
Janssen, Jodi A., *Mcchord AFB, Wash.*
Jenner, Jamie M., *Dyess AFB, Texas*
Jones, Brad L., *Mt Home AFB, Ind.*
Jones Christopher, *Keesler AFB, Miss.*
Jurgilanis Steven, *Scott AFB, Ill.*

-K-

Kearny, Jennifer M., *Shaw AFB, S.C.*
King, Fred S. III, *Keesler AFB, Miss.*
Knight, Fambro W. II, *Fort Eustis, Va.*
Knight, Robert A., *Macdill AFB, Fla.*
Kormanyos, Scott B., *Hill AFB, Utah*
Krebs, Aaron C., *Scott AFB, Ill.*

-L-

Labare, Warren J., *Red Cloud, Korea*
Lamson, Geoffrey M., *Anderson, Guam*
Lane, Corey B., *Fort Bragg, N.C.*
Lee, Craig R., *Seymour Johnson, N.C.*
Lee, Latoya M., *Fort Hood, Texas*
Lopez, Tamiko E., *Mcguire AFB, N.J.*
Lorentz, Mitchell C., *Elmendorf AFB, Alaska*
Lucia, Kathy L., *Keesler AFB, Miss.*
Luster, Lakeitha R., *Scott AFB, Ill.*

-M-

Macho, Brian C., *Offutt AFB, Neb.*
Maier, Scott M., *Incirlik, Turkey*
Mann, Philip K., *Keesler AFB, Miss.*
Manzanares, *Tobias, Fairchild, Wash.*
Mazuccimambala, Mic, *Keesler AFB, Miss.*
Mcates, Jenny L., *Luke AFB, Ariz.*
Mcgee, Eric J., *Laughlin AFB, Texas*
Mckenzie, James L., *Camp Humphries Korea*
Mcquown, Richard T., *Mt Home AFB, Idaho*
Moore, Roscoe A., *Cannon AFB, N.M.*
Moore, Scot A., *Shaw AFB, S.C.*
Morgan, Michael W., *Weisbaden,*

Lorentz, Mitchell C., *Elmendorf AFB, Alaska*
Lucia, Kathy L., *Keesler AFB, Miss.*
Luster, Lakeitha R., *Scott AFB, Ill.*

-M-

Macho, Brian C., *Offutt AFB, Neb.*
Maier, Scott M., *Incirlik, Turkey*
Mann, Philip K., *Keesler AFB, Miss.*
Manzanares, *Tobias, Fairchild, Wash.*
Mazuccimambala, Mic, *Keesler AFB, Miss.*
Mcatee, Jenny L., *Luke AFB, Ariz.*
Mcgee, Eric J., *Laughlin AFB, Texas*
Mckenzie, James L., *Camp Humphries Korea*
Mcquown, Richard T., *Mt Home AFB, Idaho*
Moore, Roscoe A., *Cannon AFB, N.M.*
Moore, Scot A., *Shaw AFB, S.C.*
Morgan, Michael W., *Weisbaden, Germany*
Moullet, James A., *Bad Kreuznach, Germany*
Murray, Joshua W., *Eglin AFB, Fla.*

-N-

Nichols, Andrew D., *Keesler AFB, Miss.*
Noradki, Allyn, *Offutt AFB, Neb.*

-O-

Oates, Michael C., *Vandenberg, Calif.*

-P-

Paul, Bradly S., *Hurlburt Fld, Fla.*
Pedicone, Erick A., *Travis AFB, Calif.*
Perkins, Beth A., *Barksdale AFB, La.*
Perrone, Clint A., *Spangdahlem, Germany*
Peterson, Leticia V., *Offutt AFB, Neb.*
Peterson, Stacey L., *Keesler AFB, Miss.*
Pickens, Jennifer L., *Fort Polk, La.*
Pimentel, Victor E., *Altus AFB, Okla.*
Plater, Steven J., *Fort Belvoir, Va.*
Powell, Lori A., *Tinker AFB, Okla.*
Price, Allan, *Fort Campbell Ky.*
Promenchenkel, *Lawrence, Red Cloud, Korea*

-R-

Reisner, Troy A., *Hill AFB, Utah*
Reisner, William R., *Mcchord AFB, Wash.*
Rethman, Amy E., *Luke AFB, Ariz.*
Richards, Kylene R., *Hunter AFB, Ga.*
Rieth, Shaun M., *Offutt AFB, Neb.*
Roache, Leslie M., *Offutt AFB, Neb.*
Roberts, Christina, *Hunter AFB, Ga.*
Roberts, Tracy A., *Offutt AFB, Neb.*
Robinson, Pierre J., *Schriever AFB, Colo.*
Robinson, Shelton D., *Dyess AFB, Texas*
Rosado, Miguel A., *Keesler AFB, Miss.*
Rosales, Michael J., *Keesler AFB, Miss.*
Ross, Michael C. II, *Shaw AFB, S.C.*
Ross, Robert D., *Offutt AFB, Neb.*

-S-

Schatz, Zakary M., *Mcchord AFB, Wash.*
Schweigert, Jill C., *Nellis AFB, Nev.*
Scovill, Alicia A., *Camp Humphries, Korea*
Siebert, Shane M., *Offutt AFB, Neb.*
Simpson, Joseph P., *Hurlburt Fld, Fla.*
Smart, Andrew D., *Yong San, Korea*
Smiley, Terrance D., *Scott AFB, Ill.*
Smit, Chad M., *Keesler AFB, Miss.*
Smith, Jeffrey E, *Whiteman AFB, Mo.*
Smith, Mark E, *Keesler AFB, Miss.*
Souchek, Rodman B., *Offutt AFB, Neb.*
Southall, Terry C., *Asheville, N.C.*
St Jacques, Sarita, *Hill AFB, Utah*
Stavenger, Bonnie L., *Aviano, Italy*
Stewart, Jason B., *Keesler AFB, Miss.*
Stewart, Tonya R., *Offutt AFB, Neb.*
Strobel, Gregory R., *Tyndall AFB, Fla.*
Sullivan, Timothy P., *Incirlik, Turkey*
Sumrall, Craig M., *Offutt AFB, Neb.*
Sutton, David J., *Grafewohr, Germany*
Sweat, Perry C., *Camp Stanton, Korea*
Swetland, Debbie L., *Hurlburt Fld, Fla.*

-T-

Tannehill, Joshua C., *Offutt AFB, Neb.*
Tarras, Michele L., *Keesler AFB, Miss.*
Taylor, Joseph D., *Fort Eustis, Va.*
Taylor, Roxann R., *Offutt AFB, Neb*
Teague, Tommy L., *Shaw AFB, S.C.*
Tennell, Denette S., *Fort Hood, Texas*
Thomas, Tia F., *Fairchild AFB, Wash.*
Thompson, Gerry Q., *Keesler AFB, Miss.*
Thornbury, Michael, *Seymour Johnson, N.C.*
Tirschel, Dionne M., *Offutt AFB, Neb.*
Townsend, Christina, *Hunter AFB, Ga.*
Traister, George R., *Peterson AFB, Colo.*

-V-

Valentine, Alisha R., *Offutt AFB, Neb.*
Verasamy, Marlon C., *Hohenfels, Germany*

-W-

Watt, Nya S., *Tyndall AFB, Fla.*
Wells, Hilton R., *Fort Polk, Ind.*
Wesson, Aaron A., *Vance AFB, Okla.*
White, Clarence E J., *Keesler AFB, Miss.*
Wiles, Joseph B., *Langley AFB, Va.*
Williams, Harold L., *Keesler AFB, Miss.*

"History does not entrust the care of freedom to the weak or the timid."

President Dwight D. Eisenhower
Inaugural Address, 20 January 1953