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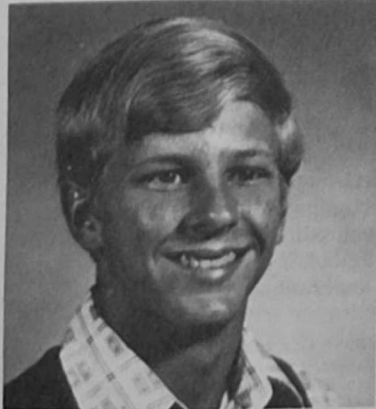


Small vortices swirl around atop the water in Gatun Lake, Panama (photo left). According to the photographer, Capt. Richard A. Rasmussen, Detachment 25, 5th Weather Wing, Howard AFB, CZ, "There are few things in this world that will make a fisherman lose interest in fishing—but the birth of a water spout is one of those things. About 20 minutes later a second photograph (above right) displayed a fully developed waterspout. (U.S. Air Force photos)

Waterspout

Family foursome goes USAF

RANDOLPH AFB, TX—With the appointment of Lee J. Lorenzen to the Air Force Academy's Class of



Lee Jay Lorenzen

1981, there are four Air Force uniforms in his family.

Father of the three other Air Force members is Col. Loren Lorenzen, 24th Weather Squadron commander. The other two members are 2nd Lt. Jay Lorenzen, who was commissioned through the Reserve Officer Training Corps (ROTC) program at Auburn University, and 2nd Lt. Gary Lorenzen, a 1976 Air Force Academy graduate. Jay is now a KC-135 navigator at Barksdale AFB, LA, and Gary is a navigation student at Mather AFB, CA.

Colonel Lorenzen, like son Jay, was commissioned through the ROTC program, but at the University of Iowa.

Command seeks reader opinion

Editor's note: This issue of the Air Weather Service (AWS) OBSERVER contains the first "Report to the Stockholders" to be distributed by means of the command newspaper. To enable Headquarters AWS officials to evaluate its acceptance, I ask that you complete the evaluation form (right) and send it to: AWS/CS, Scott AFB, IL 62225. From your response will come the decision to provide a similar report again—or not.

Majority goes to 45 AWS men

SCOTT AFB, IL—Among the many Air Force captains recently selected for promotion to major, 45 are members of Air Weather Service (AWS). They are:

Headquarters AWS: Randolph W. Ashby, Jimmy N. Fulford and Robert E. Introne Jr.

1st Weather Wing: Paul H. Neu, Norman W. Stoldt and Frank H. Wells.

2WW: John E. Holdner, James O. Hull, Robert L. LaPierre, Thomas E. Pratt, Larry L. Terrell, Kenneth L. Wantzloeben, Darell R. Whitehead and Donald M. Withers.

3WW: Henry A. Adams III, Robert L. George, Richard F. Himebrook and Ronald W. Tubbs.

5WW: Nelson Arzola, James E. Henson, Lynn M. Lard, Richard L. Nieman, Robert G. Peterson, Richard A. Rasmussen and Robert P. Wright.

7WW: Joseph L. Small.

Air Force Global Weather Central: Charles R. Abernathy, Yates J. Canipe, Falko K. Fye, James A. Ingle, James E. Kester, William D. Klein, Timothy M. Laur, James A. Lindquist, William B. Maxwell Jr., Michael P. McGaughy, Laurence O. Mindenhall, Frederick V. Menkelo, Harvey J. Miller, Calvin C. Naegelin, Gary E. O'Connor, Joseph E. Sims, Stanley Y. Strader, Robert Taiclet and Robert A. Wachtman.

Organization's men make night parachute jump

BAD TOLZ, GERMANY—For what Capt. Wilbur G. Hugli, staff weather officer, believes to be the first time, Operating Location C, 7th Weather Squadron, had all its members take part in a night equipment parachute jump.

Captain Hugli, who only recently completed French airborne training to receive French Airborne Wings, was jumpmaster for the night drop. He was followed by Maj. Walter K. Schmidt, the air liaison officer; SSgt. John R. Schneider; Sgt. Eugene S. Roberts Jr.; and A1C George L. Cline.

Inside:

Command line	2
AWS Scientist (Spotlight)	2
Weather whys???	2
Major safety change	3
Baby delays dad	4
Analysis made fun	4

A reader's opinion

To: AWS/CS
Scott AFB, IL 62225

1. After examining the "Report to the Stockholders" I feel it is:
(Circle one in each area)

A waste Of little interest Good Very Good Outstanding

2. My rank/grade is:

AB	AMN	A1C	SrA	Sgt.	SSgt.	TSgt.	MSgt
SMSgt.	CMSgt.	2nd Lt.	1st Lt.	Capt.	Maj.		
Lt. Col.	Col.	Civ (GS 1-9)	Civ (GS 10-)				

Command line 'My report to you'

Not long ago I told you I would produce a "Report to the Stockholders" which would give an overview of where we have been and an indication of where we intend to go in the future. That report is now a reality.

Just as I must keep abreast of what takes place in Air Weather Service (AWS) to do my job properly, I feel you need to know too. You all share AWS' successes, problems and responsibilities. Shares belong to shareholders—stockholders—so this report is my report to you. I urge that you take time to read it so you will be an informed "stockholder."



Brig. Gen. Berry W. Rowe
AWS commander

Daniels receives MAC CEM award

WIESBADEN AB, GERMANY—MSgt. Rogers T. Daniels, Detachment 51, 2nd Weather Wing, received the MAC Outstanding Communications-Electronic-Meteorological (CEM) Superintendent of the Year award recently.

The annual award recognizes outstanding performance, superior leadership, management and personal achievement by a CEM supervisor.

Sergeant Daniels is responsible for quality control inspections for 27 maintenance work centers which employ 109 technicians, relate to 158 major ground meteorological systems and equipments as well as 309 major components at 39 locations.

Lets swap

Present wing: (Circle) 1 2 3 5 7 AFGWC

Rank/Name: _____

CAFSC: _____ Base: _____

Mail Address: _____

Want to go: _____

The eligibility rules for exchanging assignments are contained in AFR 39-11. If you meet the criteria and want to swap, fill coupon and send to: AWS/CMS, Scott AFB, IL, 62225.

Swap list

Three people want to swap assignments with other persons of the same specialty code. They are:

25150—A1C Michael D. Hammond, Rt. 1, Box 114A, Woodlawn, TN 37191, now assigned at Ft. Campbell, KY. He wants Ellsworth AFB, SD.

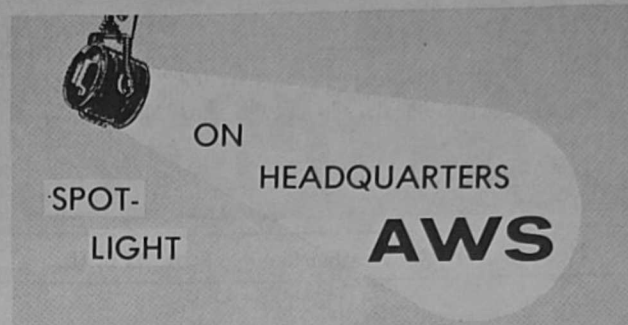
25150—A1C Dale F. Werth, 302 MacArthur Blvd, Warner Robins, GA 31098. He is assigned at Robins AFB and wants Luke or Williams AFB, AZ or anywhere in Southern California.

25150A—SSgt. Earl J. Simon, PSC 2607, Fairchild AFB, WA, wants McClellan, Mather or any other AFB in California.

Brig. Gen. Berry W. Rowe
Commander, Air Weather Service
David F. Barr
Editor

The Air Weather Service OBSERVER is an official Class IIC Air Force newspaper published monthly for personnel of the worldwide Air Weather Service of the Military Airlift Command and under the supervision of the Office of Information, Headquarters, Military Airlift Command, Scott AFB, IL, 62225. Opinions expressed herein do not necessarily represent those of the Air Force. Material which appears herein may be reprinted without

C C N



by
Robert
G.
Miller
(PhD)

The chief scientist is the principal scientific advisor to the Air Weather Service (AWS) commander, his staff and all subordinate units.

He provides advice and recommendations on scientific and technical support problems, but also is liaison between the military and civilian meteorological communities.

Additionally, he is the commander's representative to national and international scientific committees and boards during his one-year tour.

The current chief scientist is Dr. Robert G. Miller, who has more than 20 years experience in meteorology and statistics. Dr. Miller will concentrate on four major areas: probabilities, verification, statistical forecasting, and training and education.

As a statistician, the main focus of his work is probability forecasting and how it can provide improved weather support by using mission success indicators (MSIs). The MSIs are oriented to a customer's critical decision criteria.

Dr. Miller seeks ways to improve AWS' current categorical verification efforts. He also examines the verification needs of future probabilistic weather forecasts.

His examination is to insure the products are technically evaluated in order to assess the quality of our product.

In the area of statistical forecasting, the chief scientist works with the deputy chief of staff for Aerospace Sciences (AWS/DN) to analyze various techniques which may improve AWS' forecasting capability.

Finally, in the area of training and education, Dr. Miller is assisting AWS/DN to prepare a probability forecasting pamphlet to be used to train field forecasters. The pamphlet will explain what probabilities are, why they should be used and how best to use them. Also, the chief scientist is co-writing an MSI handbook for staff weather officers. The handbook expands the AWS/DN pamphlet to show how an individual can tailor basic probability forecasts for the specific needs of the customer.

Although the chief scientist does not have a permanent staff to assist him, one officer in each major headquarters function has an additional duty as a member of Dr. Miller's staff. Their responsibilities include helping him to coordinate projects through the headquarters and assist with special projects.

In memoriam

SAN ANTONIO, TX—Col. William C. Anderson (USAF Ret.), 60, whose last assignment with Air Weather Service was as 24th Weather Squadron commander, Randolph AFB, TX, died at Universal City, TX, his home, Jan. 1, 1977. He retired from active duty June 4, 1973.

Burial was with full military honors Jan. 6 in the Ft. Sam Houston National Cemetery, here.

Personnel shorts

Did you know that:

* Plans to increase the number of weather people in air route traffic control centers (ARTCCs) were held up?

* Some Air Weather Service detachments use a forecaster-observer team concept to ease the station chief's supervisory-management load? The concept works well and provides shift forecasters management,

supervisory and proficiency report writing experience.

* An E-4 sergeant outranks any E-4 senior airman?

* The USAF 9-level Upgrade Examination will be used in conjunction with the new 9-level upgrade procedures? It will be given in March, June, September and December of each year and scored on a percentile basis.

Weather whys???

Q. In the past, weather observers (252X1s) filled weather reconnaissance authorizations. How will the single career ladder be adapted to recon? What is the future for enlisted people in recon?

A. Air Weather Service will provide Aerospace Rescue and Recovery Service (ARRS) the 25XXX people for reconnaissance duty. There are 24 total enlisted authorizations (grades E-3 through E-7) at Keesler AFB, MS, and Andersen AFB, Guam, all of which are dropsonde positions. Of these, 18 are for E-3 through E-5 25150s and therefore available to first-term people. We now seek 25170 volunteers (E-6, E-7) to replace six 25271 incumbents as they leave. The six authorizations involve management, supervisory and

training responsibilities in addition to dropsonde duties. AWS recon involvement is a continuing program open to men and women. All positions require the person to be physically qualified for flying duty. If you seek an interesting, exciting and different assignment and desire to receive flight pay, review AFR 39-11 and volunteer. For more detailed information, contact AWS/DOR, Autovon 638-4624.

Q. The "Personnel Shorts" column in the December AWS OBSERVER said, "Persons selected for an overseas tour who refuse to extend or re-enlist to complete a full tour will be removed from the assignment and are ineligible for promotion and must separate on the date of

separation." I don't think this is absolutely true—it does not apply to first-term people.

A. You are absolutely correct. Thank you for bringing it to our attention. In our quest for short one-liners some pertinent facts were left out. If a person signs the declination statement, the "Personnel Shorts" item is correct. However, first term airmen have the option to refuse to extend or re-enlist to obtain the required retainability to complete the overseas tour. They also have the option to refuse to sign a declination statement. Therefore, first-term airmen may refuse the assignment, refuse to complete a declination statement, and still be eligible for promotion and reenlistment.

permission, but credit to the Air Weather Service OBSERVER is requested. News, features, art or photographic material is solicited from readers, but publication depends on the judgement of the OBSERVER staff. No payment will be made for contributions. Paid advertising is not accepted. Editorial office phone numbers are: 618 256-5003/4615 or Autovon 638-5003/4615.

AF makes big safety changes

SCOTT AFB, IL—Vivian Payne, a ground safety specialist at Headquarters Air Weather Service (AWS), announced that a recent USAF message pertaining to safety reporting made several major changes. The changes will affect AWS safety representatives and commanders.

According to Mrs. Payne, the changes involve mishap classification. The changes introduce new terms pertaining to severity of injuries.

"The biggest change," said Mrs. Payne, "is that cost figures were revised."

A major printed revision of AFR 127-4 is now being prepared and is expected by AWS safety officials to be distributed to units in the spring.



A TRADITION may have started in the Maj. Richard A. North (USAF Ret.) family. Major North was a weather forecaster during his active Air Force years. Today his daughter, Sgt. Leslie J. North does the job at Detachment 22, 26th Weather Squadron, Carswell AFB, TX. To keep in touch (and keep his daughter alert), Major North has Leslie keep him current in the latest forecasting techniques. (U.S. Air Force photo)

AWS salutes. . .

MEDALS

Meritorious Service Medal: (Two oakleaf clusters (OLC)) Col. Thomas A. Studer, 1st Weather Wing (WW), Hickam AFB, HI. (One OLC) Maj. Larry W. Jobs, Headquarters Air Weather Service (AWS), Scott AFB, IL. (Basic) Maj. Victor F. Sartorius, 26th Weather Squadron (WS), Barksdale AFB, LA; TSgt. Ray E. Stark and Maj. Ronald E. Bolliger, Air Force Global Weather Central (AFGWC), Offutt AFB, NE; MSgt. Gary L. Price, Det. 15, 24WS, Vance AFB, OK; and Maj. Lawrence J. O'Shea, 9WS, March AFB, CA.

Air Medal: (Second OLC) SSgt. James L. Reardon, 54th Weather Reconnaissance Squadron (WRS), Andersen AFB, Guam.

Air Force Commendation Medal: (Second OLC) Capt. Marilyn R. Miller and Donald R. Hay, AFGWC. (First OLC) Capt. Chester V. Wilda, Detachment (Det) 7, AFGWC, Carswell AFB, TX; TSgts. Ronald J. Headid and Albert R. LeBlond, AFGWC, and Capt. Jesse E. Neyman, AWS, (Basic) SSgt. Karl N. DeMello, Det. 7, 1WW, Nimitz Hill, Guam; Sgt. Wayne A. Goodlin, Det. 6, 12WS, Peterson AFB, CO; MSgt. Douglas L. Lavender, Det. 7, AFGWC, Carswell AFB, TX; Capt. Charles C. Morrill, Det. 7, 5WS, Ft. Ord, CA; SSgt. Richard A. Warner III and Capt. Robert A. Wachtman, AFGWC; TSgt. Delwin P. Nance, Det. 10, 7WW, McGuire AFB, NJ; SSgt. Robert F. McDowell, Det. 29, 25WS, Buckley ANGB, CO; and 1st Lt. Robert B. Palmer, 54WRS, Andersen AFB, Guam.

Army Commendation Medal: TSgt. Kenneth A. Brown, Det. 7, 5WS, Ft. Ord, CA; and TSgt. William F. Smith, Det. 11, 5WS, Ft. Sill, OK.

Air Force Good Conduct Medal: (Second OLC) SSgt. Ronald S. Lalonde, TUSLOG Det. 2. (First Cluster) SSgt. Luther J. Miller Jr., Det. 11, 7WS, Coleman Bks, Germany. (Basic) MSgt. David R. Anderson, 9WS, March AFB, CA.

SPECIAL HONORS

The quality of weather people was recognized outside AWS when four members of the command were chosen "the best" on their base for various honors. They are: Capt. Joseph R. Wagenhofer, ETAC, Scott AFB, IL, Junior Officer of the Month; SMSgt. James S. Parish, Det. 25, 5WW, Howard AFB, CZ, Senior NCO of the Quarter (NCOQ); A1C Deborah A. Runyan, Det. 20, 24WS, Laughlin AFB, TX, Airmen of the Month (AOM); and Sgt. Lucius R. Degrate Jr., Det. 7, AFGWC, Carswell AFB, TX, NCOQ.

TSgt. Jean-Lorre Smith, Det. 1, 2WS, WPAFB, OH, recently received multiple honors. He was chosen as the Aeronautical Systems Division Career NCOQ, 4950th Test Wing NCOQ and WPAFB's NCOQ. The honors earned him two plaques and two certificates.

MSgt. Berth C. Frankowiak, Det. 14, 7WW, Norton AFB, CA, earned a certificate and three letters of appreciation for his part in Exercise Brave Shield XV.

At AWS, Col. Arthur Bidner and Lt. Col. David E. Smart received certificates of appreciation for improvement suggestions they made.

SERVICE SCHOOLS

SMSgt. William E. Nelson, Det. 5, 1WW, Clark AB, RP, and SMSgt. Conway S. Birrell, 1WW, Hickam AFB, HI, completed the Senior NCO Academy (NCOA).

Capt. John E. George, AFGWC, was a distinguished graduate (DG) of the Squadron Officer School.

NCOA graduates from AFGWC were MSgt. John Mann and TSgts. Philip E. Bernin and William Gravel. Others

were MSgt. Donald E. Ashworth, Det. 8, 30 WS, Kadena AB, Japan; MSgt. Edward P. Dunham, Det. 10, 2WS, Eglin AFB, FL; TSgt. Frank L. Fox, Det. 1, 24WS, Randolph AFB, TX; TSgt. Rodney W. Gaudreau (DG), OL-X, Det. 6, AWS, Portland IAP, OR; MSgt. Frank B. Kohn Jr. (DG), 7WW, Scott AFB, IL; and TSgt. Thomas M. Morancey (DG), Det. 28, 26WS, Wurtsmith AFB, MI.

NCO Leadership School (NCOALS) graduates include SSgts. Ralph W. Fahr Jr. and Franklin D. Cole, Det. 8, 30WS, Kadena AB, Japan. Sergeant Cole was a DG and earned the drillmaster award. Others are SSgt. Richard S. Silva, Det. 21, 9WS, Minot AFB, ND, as flight commander; SSgt. Everett E. Bolin, Det. 22, 24WS, Keesler AFB, MS; SSgt. Harold J. Arns, Det. 21, 9WS, Minot AFB, ND, who was an honor graduate and earned the instructor abilities award.

The NCOALS DG title also went to SSgt. Michael S. Smith, Det. 11, 9WS, Beale AFB, CA. Other graduates are, from AFGWC, SSgts. John F. O'Brien, Joseph S. Malloni, Steven G. Stukes, William Farr Jr., Brenda J. Sheldon, James E. Warnke, Charles E. Wiley and Bel M. Broadley. Maj. Laurence D. Bachman, AWS, completed the Industrial College of the Armed Forces.

Maj. James K. Broyles, AWS, completed the Air Command and Staff College.

UNIT HONORS

Double honors went to a Det. 41, 12WS, pair at Ft. Lee, VA, recently. Sgt. Michael L. Terry, and administrative specialist, took quarterly and annual honors as his unit's most outstanding NCO. A1C Earl C. Combs did the same in competition for the unit's airman honors.

At Det. 10, 2WS, Eglin AFB, FL, SMSgt. Calvin S. Quattlebaum was chosen Senior NCO of the Quarter (NCOQ); Sgt. Thomas S. Lees as NCOQ and A1C Melvin C. Sawyer as Airman of the Quarter (AOQ). Annual honors doubled Airman Sawyer's wins when he was chosen as the unit's Airman of the Year. NCO of the Year honors went to SSgt. James M. Lohr and Senior NCO of the Year to MSgt. Arthur O. Johnson.

MSgt. James M. Rischer, Det. 2, 2WW, Ramstein AB, Germany, is the Senior NCOQ for Headquarters 2WW and its direct-reporting units.

Sgt. Michael S. Terry, Det. 41, 12WS, Ft. Lee, VA, is his unit's NCO of the Year. A1C Earl C. Combs is Det. 41's Airman of the Year.

Sgts. Douglas Presley and Toni Humphrey and A1C Phillip Davis were chosen Det. 14, 7WW (Norton AFB, CA) Observers of the Month during separate competitions.

MSgt. Roland D. Munson and A1C John W. Merriman, Det. 11, 2WS, Patrick AFB, FL, are their unit's NCOQ and AOQ, respectively.

PROMOTIONS

To major: Robert D. Smith, Det. 11, 2WS, Patrick AFB, FL; John E. Shaughnessy Jr., Det. 21, 9WS, Minot AFB, ND.

To 1st Lt.: Edward T. Woodward, Det. 4, 1WW, Hickam AFB, HI.

To chief master sergeant: William A. Gravens, AFGWC.

To master sergeant: William V. Reed, AFGWC. To technical sergeant: Charles Henderson, George Shook, Gary Winters and James Young, Det. 4, 1WW, Hickam AFB, HI; Charles N. Vistart, James L. Groebner and Robert J. Hooker, AFGWC.

To staff sergeant: Jerry A. Kotek and Frederick

Leavitt, AFGWC; Orlando C. Aquilizan and Polly A. Peyer, Det. 6, 12WS, Peterson AFB, CO; and Anthony Yarn, Det. 10, 7WW, McGuire AFB, NJ.

To senior airman: Michael A. Matthews and Gail S. Stroede, Det. 26, 26WS, Grissom AFB, IN; John L. Fox, Det. 15, 24WS, Vance AFB, OK; Victor Howell, Det. 14, 7WW, Norton AFB, CA; Todd R. Keupp, Det. 21, 9WS, Minot AFB, ND; Leon A. Miller and James M. Taylor, Det. 11, 2WS, Patrick AFB, FL; Robert E. Corn and Kim W. Johnson, Det. 7, 5WS, Ft. Ord, CA; Michael Littleton, Det. 22, 24WS, Keesler AFB, MS; Claude E. Spoor, Det. 6, 12WS, Peterson AFB, CO; John S. Fox, Det. 11, 25WS, Cannon AFB, NM; William Oakes and Mona Cole, Det. 11, 9WS, Beale AFB, CA; and Charles S. Schlinke, Roger J. Cannon, Randall M. Gray and Donald L. Mercer Jr., AFGWC.

To airman first class: Charles L. Williams, Det. 11, 2WS, Patrick AFB, FL; Charlene L.B. Green, Det. 21, 9WS, Minot AFB, ND; Douglas S. Parker and Robert G. Miller, Det. 6, 12WS, Peterson AFB, CO; William J. Boyle, Det. 8, 30WS, Kadena AB, Japan; William DeRuyter and Richard Gross, Det. 11, 9WS, Beale AFB, CA; and Steven W. Bogdahn, Peter D. Bylsma, Kerry L. Joens, Jeffrey C. Strong, Charles L. Vogel, Joy W. Bodendorf, Theodore Bradshaw, Jon W. Franson, Richard L. Hoffman, Ginger L. Holman, Kenneth D.J. Jewell, Joseph Lufuran Jr., Truman D. Sanderson, Tracey L. Stauffer, Danny R. Watkins, William F. Wheeler, Deborah J. Wittig and Stephen J. Wright, AFGWC.

CIVILIAN HONORS

Robert Payne, a weather maintenance supervisor at Det. 12, 3WS, Selfridge ANGB, MI, was recently named MAC Outstanding Communications-Electronics-Meteorological Maintenance Civilian of the Year.

Beverly S. Moore, 9WS, March AFB, CA, was awarded a quality salary increase.

Edwin B. Dickson and Avon C. Bradshaw, AWS, received Outstanding Performance Rating Certificates.

BIRTHS

A1C Cheryl A. Smith and husband, daughter, Colleen Bernedette, Dec. 9. Mother is an observer with Det. 21, 9WS, father with 91SMW, Minot AFB, ND.

A1C and Mrs. Rocket J. Barber, son, Rocket Jason, Nov. 4. Father is an observer with Det. 21, 9WS, Minot AFB, ND.

SSgt. and Mrs. Michael A. Jimenez, daughter, Juliana Lynn, Nov. 13. Father is a duty forecaster with the MAC weather support unit, Scott AFB, IL.

A1C and Mrs. Tyrone Davis, daughter, NA Tasha, Dec. 15. Father with Det. 11, 25WS, Cannon AFB, NM.

TSgt. and Mrs. William F. Smith, son, William Matthew, Dec. 6. Father is with Det. 11, 5WS, Ft. Sill, OK.

A1C and Mrs. Larry Shipp, son, Brandon Joseph, Dec. 11. Father is an observer with Det. 14, 7WW, Norton AFB, CA.

Sgt. Toni Humphrey and husband, daughter, La Tanya Denise, Dec. 15. Mother is an observer with Det. 14, 7WW, Norton AFB, CA.

A1C and Mrs. Jerry L. Cox, son, Jarod W., Oct. 13. Father with 9WS, March AFB, CA.

Sgt. and Mrs. Larry J. White, son, Joshua Joe, Dec. 20. Father is an observer with Det. 29, 25WS, Buckley ANGB, CO.

Col. and Mrs. James S. Kennedy, daughter, Meredith Kathleen, Aug. 23. Father is the assistant deputy chief of staff for Operations, AWS.

Baby delays dad's medal

FT. SILL, OK—On the morning TSgt. William F. Smith, Detachment 11, 5th Weather Squadron, was to receive the Army Commendation Medal for outstanding job performance while he was in Europe, things went "wonderfully wrong."

The evening before he mentally prepared himself for the next day's ceremony. Shortly before dawn his much rehearsed plans fell apart.

In the morning's early hours Sergeant Smith's wife, Ruby, announced that their third child was about to arrive. After quick arrangements for the other children, Sergeant and Mrs. Smith rushed to the Ft. Sill hospital. There, shortly after 5 a.m., Ruby presented her husband a third son, William Matthew.

At ceremony time, which was 8:30 a.m. the same day, the unit commander announced, "Some things can wait, others cannot." At 9:30 a.m. things once more fell into place and Sergeant Smith got his medal.

Tired, but proud, Sergeant Smith sighed, "Its been just a fantastic day."

Squadron turns analysis into fun

FT. LEE, VA—When the 12th Weather Squadron recently checked the quality of its severe weather analysis by making the test into fun, its Detachment 41, here, became a winner. The 12WS sponsored an analysis contest.

According to 1st Lt. Gordon J. Haugen, Det. 41 information officer, "Awards were given to the best overall detachment and best individual analysis of each category. Detachment 41 was honored to have won the detachment award and have one of its forecasters, TSgt. Erwin H. Koraith, win the individual award for his surface analysis."

A lesson from history

Win in North Africa comes behind weather

by
John Fuller
AWS Historian

After El Alamein and the winning of Algeria in November 1942, the Allies turned eastward, hoping to trap remaining German and Italian Axis forces in Tunisia. The Allied drive broke down, caused in great degree, by poor weather associated with the rainy season which made impossible the close-air support needed for advancing infantry and armor.

In mid-February 1943, Field Marshal Erwin Rommel's Afrika Korps counterattacked and soon broke through the Kasserine Pass, driving Allied elements back into Algeria. The adverse weather, which kept Allied airpower grounded, limited Luftwaffe (German Air Force) support to Rommel.

When the skies cleared, the Allies resumed the initiative. They drove the Axis into a defensive position on

the Mareth Line. The Mareth Line was a Tunisian version of the French's Maginot Line and stretched 25 miles southwesterly from Zarat on the Gulf of Gabes. The move set the stage for the last phase of the battle for Tunisia.

The first attacks against the Mareth Line began the night of March 16-17. The main thrust was begun by the British 8th Army on the evening of Mar. 20 with the first available moonlight. Inclement weather cancelled bombing operations by the U.S. Army Air Forces' 9th and 12th Air Forces (AF) on Mar. 17-19, although some fighters were able to furnish support.

Full air support resumed on Mar. 20 when clear weather returned and, except for a stand down brought on by low clouds and intermittent (but heavy) rains on the 22nd, continued until the 26th. That day, the planned 24-hour air bombardment, which was to precede a renewed Allied assault on the Mareth Line, was interrupted by morning sandstorms at the home fields. The British took advantage of the storms. They positioned their troops behind the

storms and advanced with the late afternoon sun at their backs. The combination of sun and dust in their faces kept the Germans from realizing an attack was underway until it was too late. The British were upon them. King Solomon is said to have used the same tactic 29 centuries earlier.

AWS' 12th Weather Squadron (WS), headquartered in Algiers, provided weather support to the 12AF; the 19WS, headquartered at Gura, Eritrea, supported the 9AF. During early 1943 the 12WS' weather stations were within 40-50 miles of the Tunisian front. During the push through the Kasserine Pass, the Germans overran Thelepte, Tunisia's 12WS station and to within 10 miles of the station at Tebessa, Algeria.

After the Germans retreated from Thelepte, 12WS weathermen were among the first Americans to return. By Mar. 10, 1943, the weathermen provided forecasting service to various Allied fighter and bomber units there. Within another four days they were compiling and furnishing ballistic wind data to all nearby Allied artillery batteries.

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Sports

Weathermen win court crunch

LAJES FLD, AZORES—John Heidendahl, Detachment 19, 7th Weather Wing here, recently walked out on the court and proceeded to claim the Lajes Racquetball Tournament winner's spot. When he could only take the runnerup spot in the base's handball tourney singles, he teamed with Eugene Gray for the team event. The pair won first place.

Rasmussen gets bowling title

HOWARD AFB, CZ—The 1,300-member Pan-Canal Bowling Association (PCBA) recently paid special honor to Richard A. Rasmussen, Det. 25, 5th Weather Wing here. It named him Bowler of the Year.

The honor stems from what the PCBA cited as "Outstanding performance and sportsmanship during the 1975-1976 season."

Among Rasmussen's achievements were: highest composite average in the association; high average and first place in the Traveling Classic Scratch League and high all-events scratch in the annual city tourney. He also was a league official in two separate leagues.

Unit offers aid to foundation

by

Capt. Robert E. McPeck
AFGWC Information Officer

OFFUTT AFB, NE—Seventeen Air Force Global Weather Central (AFGWC) people rallied behind Mrs. Deanne Coalson, wife of a retired AFGWC forecaster and executive director for the Nebraska Cerebral Palsy Foundation (CPF), to raise funds for the CPF.

The results of the effort? \$27,000.

The Nebraska CPF found itself short of funds last summer. To continue its various programs Mrs. Coalson asked for ideas for ways to solve the problem. In response, Roy Raynor, a technical representative assigned to AFGWC, suggested a Bowl-A-Thon for the young people of Omaha.

Approval from the Omaha American Junior Bowling Congress (AJBC) led to adult supervisory volunteers arranging for young bowlers, materials, and places to bowl. The 17 AFGWC men were part of the supervisory volunteers.

Unit members taking part were Charles T. Davis, Thomas Lawrence, Henry M. Fountain, Dennis M. Hill, Kenneth R. Harrigan, Robert L. Haverstick, Charles C. Olsen, Thomas J. Edwards, John L. Sacksteder, James G. Ingals, Marcus L. Sherrill, James G. Benedict and Frederick R. Roger.

Also there were Donald O. Noehre, Donald R. Hagen, Deane J. Millington Jr. and Ira M. Taylor Jr.



HOW MANY people would believe it to be humanly possible to pedal a bicycle from the Pacific Ocean to the Atlantic Ocean in five hours and 38 minutes? Fred Park and Bob Carlisle did it by crossing the Isthmus of Panama. They are members of Detachment 25, 5th Weather Wing, Howard AFB, CZ. (U.S. Air Force photo by SSgt. Michael V. Longfellow)

Tucker gets first hole-in-one

HICKAM AFB, HI—Joe Tucker got one of the most exciting Christmas gifts a golfer can get, and it came more than a week ahead of time. Tucker scored his first hole-in-one on the base's 167-yard second hole. The feat was done using a five iron while playing with Jerry and Sam Cox. The men are all members of Headquarters 1st Weather Wing here.

AWSer claims cribbage crown

SCOTT AFB, IL—Karl R. Hammerdorfer Jr., Air Weather Service headquarters, took first place in a local holiday cribbage tourney. To claim the cribbage crown he completed 10 consecutive matches without a defeat. Hammerdorfer presently works in the offices of the Military Airlift Command's deputy chief of staff for Personnel.

REPORT TO THE
STOCKHOLDERS
1976
AIR WEATHER SERVICE

To the Air Weather Service stockholders:

The beginning of a new year is a traditional time to reflect on past achievements and resolve a course of future actions. The following prospectus is intended to provide a common baseline to aid all Air Weather Service (AWS) stockholders in reviewing the 1976 AWS corporate accomplishments.

My review of this abbreviated list of achievements confirmed my conclusion gathered during visits throughout the command. That conclusion is that AWS is a healthy and progressive organization. I visited most Air Force four-star generals this year and can assure you that AWS is "bluechip stock."

The AWS product has customer acceptance, and future modifications indicate even higher user demands.

You should have pride in this year's report, resolve to increase the value of our stock and elevate the return on your investments through continued improvements of the products we provide.





A palm tree impaled by a storm cast board.

Introduction

This stockholders report is not intended to include all of the achievements and problems of the Air Weather Service. It is intended to present but an overview of the organization's 1976 activities. More details related to the subjects addressed in it and a more detailed list of involvement may be found in the official Air Weather Service history.

Contents

- I Customer Support
- II Management Actions
- III Equipment and Techniques
- IV Intra-Agency Activities
- V Vital Statistics
- VI Manpower Management Actions
- VII Organizational Changes and Moves

Abbreviations used

A		E		O	
AAD	Advanced Academic Degree	EDS	Environmental Data Service	OL	Operating Location
AAF	Army Airfield	EOD	Explosive Ordnance Device	OPS	Operations
AB	Air Base	ERCNIS	Environmental Requirements and Capabilities Management Information System	OR	Operational Requirement
ADCOM	Aerospace Defense Command	ETAC	Environmental Technical Applications Center	ORI	Operational Readiness Inspection
ADIV	Air Division	ETFU	European Tactical Forecast Unit	OT&E	Operational Test & Evaluation
AF	Air Force			OTH-B	Over-the-horizon backscatter
AFB	AF Base	F		P	
AFCS	AF Communications Service	FAA	Federal Aviation Administration	PACAF	Pacific Air Forces
AFGL	AF Geophysics Laboratory	FD	Functional Description	R	
AFGWC	AF Global Weather Central	FORSCOM	Forces Command	RAF	Royal AF - British
AFIT	AF Institute of Technology	FY	Fiscal Year	RDT&E	Research, Development, Testing & Evaluation
AFMPC	AF Military Personnel Center	H		RECCO	Reconnaissance Weather Code
AFR	AF Regulation	HF	High Frequency	RECON	Resources Conservation
AFRES	AF Reserve	HQ	Headquarters	ROC	Required Operational Capability
AFSC	AF Systems Command	I		ROS	Representative Observation Site
AFTEC	AF Test and Evaluation Center	IG	Inspector General	RPV	Remotely Piloted Vehicles
AIREP	Aircraft Report	IPADS	Interactive Processing and Display System	S	
ALO	Army Liaison Officer	IMD	Intermediate Maintenance Detachments	SAC	Strategic Air Command
ANG	Air National Guard	IWR	Improved Weather Reconnaissance	SAGE	Semi-Automatic Ground Environment
AQAM	Air Quality Assessment Model	J		SDN	Systems Development Notification
ARRS	Aerospace Rescue and Recovery Service	JCS	Joint Chiefs of Staff	SEA	Southeast Asia
ARTCC	Air Route Traffic Control Center	JCSEF	Joint Committee for Space Environmental Forecasting	SIDS	Satellite Imagery Dissemination System
AS	Air Station	JUBA	Joint Use Base Agreements	SOON	Solar Observing Optical Network
ATAF	Allied Tactical AF	L		SPM	Scans Per Minute
ATFU	Asian Tactical Forecast Unit	LACIE	Large Area Crop Inventory Experiment	STAFFMET	Staff Meteorologist
AUTODIN	Automatic Digital Network	M		STS	Specialty Training Standard (and) Space Transport System
AWDS	Automated Weather Distribution System	MAC	Military Airlift Command	SWG	System Working Group
AWN	Automated Weather Network	MACIMS	MAC Integrated Management System	SWO	Staff Weather Officer
AWS	Air Weather Service	MACR	MAC Regulation	T	
AWSP	AWS Pamphlet	MAP/SAMSR	Army Meteorological Support Requirements	TAC	Tactical Air Command
AWSR	AWS Regulation	MAWS	Modular Automated Weather System	TAF	Terminal Aerodrome Forecast
B		MCF	Mission Control Forecast	TAFVER	TAF Verification
BWS	Base Weather Station	MCP	Military Construction Program	TCV	Technical Consultant Visit
C		MET	Meteorological (and) Meteorologist Management Information System	TESS	Tactical Environmental Support System
CCTV	Closed Circuit Television	MIS	Management Information System	TN	Technical Need
CEIP	Communications Electronics Implementation Plan	MSI	Mission Success Indicator	U	
CFDS	Cold Fog Dissipation System	MWRC	Manual Weather Relay Center	UK	United Kingdom - Great Britain
CFLOS	Cloud Free Line Of Sight	N		USAFE	U.S. Air Forces, Europe
CFP	Computer Flight Plan	NASA	National Aeronautics and Space Administration	USAFPRW	AF Programs and Resources for Weather
COMEDS	Continental U.S. Meteorological Data System	NCO	Noncommissioned Officer	USAREUR	U.S. Army, Europe
CPS	Centralized Production System	NOAA	National Oceanic and Atmospheric Agency	V	
D		NORAD	North American Air Defense (Command)	VA	Visual Aid
DAC	Danish Arctic Contractor	NWS	National Weather Service	W	
DCS	Defense Communications System			WFD	Warm Fog Dissipation System
DET	Detachment			WFSC	Weather Facsimile Switching Center
DETCO	Detachment Commander			WPC	Weather Plotting Chart
DOS	Directorate of Environmental Sensors			WS	Weather Squadron
DMSP	Defense Meteorological Satellite Program			WSP	Weather Support Plan
DMZ	Demilitarized Zone			WSU	Weather Support Unit
DOD	Department of Defense			WW	Weather Wing
DRU	Direct Reporting Unit			WWMCCS	Worldwide Military Command and Control System



I CUSTOMER SUPPORT

Some projects of Air Weather Service involve major participants and emanate from the AWS headquarters or more than one of its wings. Here are but a few.

Ops Analysis

AWS continued to develop an operational evaluation program during 1976 and its regulation 178-1, "Evaluation Program," should be published in early 1977. A revised AWS pamphlet 178-2 will be published concurrently with the regulation in order to assist field units to implement the operational analysis program.

The 25th Weather Squadron, Bergstrom AFB, Tex., was one of the lead agencies assisting AWS to develop this concept. The 25WS people briefed the program to the 12AF commander, who gave his support.

An example of an abbreviated operational analysis from a 3WW unit read,

"Support provided: Det. 1, 11WS, forecast, metwatch weather warnings and briefing support to MAC aircraft flying resupply missions to Shemya AFB, Alaska, for the period October through December 1975.

"Criteria: If a flight departs based on a forecast for arrival and is able to land, that is considered a hit; if landing is not possible it is then a miss. If a flight delays due to a forecast and the weather would have been favorable for landing, that is a miss. If landing would have not been possible, then the forecast was a hit.

Summary:	Forecast Good	Forecast Bad
Observed Good	37	1
Observed Bad	0	2

"Savings: Based on two properly cancelled flights and no missed opportunities was \$21,015. The savings was authenticated by the commander of the 616th Military Airlift Group, Col. James R. Olson."

Reserve Forces

AWS exerted great effort to insure that Air National Guard (ANG) and Reserves (AFRes) are part of the "AWS family." Particularly noteworthy are three items.

"An ANG weather flight commanders' conference took place at Scott AFB, Ill., from Nov. 15-19, 1976. The commanders exchanged ideas then submitted recommendations for upgrading the ANG weather flight training program. A point brought home by the keynote speaker for the event, Maj. Gen. John J. Pesch, ANG director, left no doubt that ANG weather flights are, "... truly part of the Total Force."

*The responsibility to support U.S. Army Reserve units

previously was not clearly defined. In 1976 it was defined and now AWS has clear responsibility for arranging or providing support to them.

*ANG weather unit training in active duty base weather stations was made a special interest item for inspectors. All 39 ANG weather flights were inspected in 1976 and 13 had no major findings. Additionally, all flights either trained with an active detachment during year-round training or their members served their 15-day active duty training with an active duty BWS. Several flights took full BWS responsibilities. Related to training, AWS Regulation 50-2, "Readiness Training—ANG Weather Units" (dated Nov. 2, 1976) was published once it had been coordinated with the National Guard Bureau.

ARTCC

The AWS cell at the Kansas City, Mo., ARTCC, during 1976, provided working proof through outstanding weather support to airborne crews, that the ARTCC concept is feasible and of great value.

Technical Planning

Two major efforts stood out in the area of AWS technical planning.

*AWS correlated AF major command and U.S. Army plans with developing technology in order to evaluate the organization's customer requirements for the 1980s. AF and Army developing weapon systems were studied in order to identify new weather support requirements.

*The Support System Study, conducted by AWS, was made to identify near term planning requirements in preparation for the Automated Weather Distribution System (AWDS) and Single Career Ladder Airman implementation. A study which looks beyond the initial AWDS implementation was also completed.

Staffmets

During 1976 staff meteorologists (staffmets) were actively involved in more than 2,000 Air Force System Command (AFSC) programs, projects and studies. Forty-four staffmets supported AFSC's research and development efforts and 20 more supported test and evaluation of new weapon systems and subsystems to be acquired. The classes of systems supported during the year included piloted airframes, drones and remotely piloted vehicles, electro-optical systems, space launch vehicles, space systems, surveillance systems, and command and control and communications systems.

Army Support

U.S. Army support in 1976 was extensive. Some of the highlights were:

MSI

One of the biggest things to happen in Army support was the Mission Success Indicator (MSI) test during Exercise Reforger 76. More about this will be related later in the stockholder's report.

TESS

AWS and 5WW people worked with Army personnel on the Tactical Environmental Support System (TESS) study and the Master Plan for Satisfaction of Army Meteorological Support Requirements (MAP/SAMSR). Their efforts resulted in the publication of the TESS and approval of the MAP/SAMSR at the Combined Arms Center level.

ALO

In 1976 the Army agreed to assign an Army Liaison Officer (ALO) to AWS headquarters.

Upper Air Observations

AWS people created, then coordinated with the Army Artillery School, the format of artillery upper air observations to be transmitted to AWS. The Army is developing automated data reduction schemes for its rawinsonde data.

WWMCCS

World Wide Military Command and Control System (WWMCCS) support efforts bore fruit in 1976.

Together, 2WW, AFGWC and AWS arranged the first automated weather support to WWMCCS in June. Observations and forecasts are now being provided to the European Command Weather Support Unit for use in development of automated support concepts.

Weather information was transmitted to the AF Operations Center to be input into the National Military Command Center computer files. The input is to be part of AFGWC and AWS participation in the prototype WWMCCS Intercomputer Network test one and two. Testing was promoted by 1WS during Command Post Exercise Elegant Eagle.

With SAC and AWS coordination, 3WW published its plan for environmental support to the Strategic Air Command Control System—WWMCCS.

To enhance command control support until WWMCCS is operational, teletype circuits (1200 baud) were installed in seven command centers.

Important Items

Several achievements do not seem to fit into the major categories of this stockholders report, but they cannot be overlooked. They are:

*AWS implemented the new Domestic Pilot Reporting System.

*Weather support at Thule AB, Greenland, and Ellington AFB, Tex., are now provided by contractors.

*AWS developed a briefing for pilots to inform them of severe weather hazards. Gen. Paul K. Carlton, MAC commander, directed that all MAC crews attend the briefing.

"Paul Bunyan"

Operation Paul Bunyan began in Korea and AWS was deeply involved in it.

Following the Aug. 18 murder of two U.S. Army officers in the Joint Security Area of the Panmunjom demilitarized zone (DMZ) by North Korean border guards, U.S. Forces in the Republic of Korea went on an increased readiness status.

The U.S. officers had escorted five Korean Service Corps workers who were to trim branches from a tree. As a result of the murders Operation Paul Bunyan was implemented.

It included the deployment to Korea of a Navy Carrier Task Force, 20 U.S. Air Force F-111s and 18 F-4s.

Backed by the show of force, the U.S. Army entered the area and removed the tree without further incident. AWS provided much of Paul Bunyan's weather support, such as the Tactical Air Command (TAC) WSU. The TAC WSU provided mission control forecasts (MCF) for the tactical deployments. The 5WW furnished 24-hour support to the TAC battle staff.

Other units were also involved. AFGWC provided forecasts for selected targets, computer flight plans for deployments and special forecast products. Det. 1, AFGWC, furnished 24-hour support to the National Military Command System. ETAC provided real-time support to the Joint Chiefs of Staff. The 1WW sent nine people to augment Air Force weather operations in Korea. Finally, the 314th Air Division WSU provided MCFs during the contingency and for the Pacific Air Force Augmentation Training program, which began Aug. 24.

U.S. Forces in Korea returned to normal readiness on Sept. 7.

Individual Wing Efforts

Some projects of Air Weather Service did not emanate from the command headquarters and more than one of its wings, but were the efforts of individual wings.

First Weather Wing

*The 1WW's detachments at Wheeler AFB, Hawaii, and Osan AB, Korea began testing the value and customer acceptance of MSIs.

*Defense Meteorological Stellite Program (DMSP) site

at Yokota AB, Japan, was relocated to Osan AB, Korea.

*The 1WW's units provided weather support to forces operating in Korea, New Zealand, Australia and throughout the Pacific as well as taking part in many exercises. Among these were Cape Thunder, Triad, Summer Rain, Team Spirit, Capstan Dragon III and Kangaroo II.

Second Weather Wing

*The 7WS, working with the U.S. Army, implemented the Forward Area Limited Observing Program. The program uses Army people to increase the number of surface observations from four to 20 per division.

*The SWO to the Fourth Allied Tactical Air Force (ATAF) developed a concept plan for a meteorological cell to support 4ATAF when Det. 21 relocates from Kindsbach (Germany) Combined Military Facility to Kapaun Barracks. Staff support has been provided to 4ATAF to assist in Supreme Headquarters Allied Powers Europe directed relocations of 4ATAF.

*The 2WW participated with Allied Forces Central Europe to develop procedures to support the weather requirements of the Static War Headquarters.

*Second Weather Wing augmented 10 USAFE operational readiness inspections in 1976.

*The wing took part in a U.S. Army Europe (USAREUR) deputy chief of staff for Intelligence training project directed at providing battalion and brigade S-2 people training needed to prepare intelligence of the battlefield. An added activity will be the visit, by 2WW people, to each of USAREUR's 17 brigades to provide blocks of instruction in the areas of weather, terrain and photo reconnaissance intelligence.

*The USAFE WSU expanded to 24-hour operation and provided terminal and route metwatch for trans-Atlantic and European MAC aircraft flights.

*People of 2WW dedicated 1,725 temporary duty days to exercise support during 1976.

Third Weather Wing

The wing provided assistance to SAC in determining basing strategy for T-37 and T-38 aircraft used in the accelerated co-pilot enrichment program.

*The use of MSIs by 3WW improved the support provided to air refueling missions.

*The 12WS developed a new support procedure for the Aerospace Defense Command (ADCOM). The procedure takes advantage of products on Continental United States Meteorological Data System (COMEDS) and eliminates the need for trend forecasting.

*Cold fog dispersal in Alaska assisted 40 aircraft recoveries and 56 launches.

*A new technique of exercise support at 3WW involves the use of specially prepared AFGWC facsimile products rather than a teletype bulletin. The procedure aids SAC

forecasters because it provides a tailored graphic product. The procedure was used for SAC Operational Readiness Inspections (ORI), Snow Time and other exercises.

Fifth Weather Wing

*Improved weather support is now provided at TAC's 10 primary gunnery and bombing ranges. Flying safety and increased productivity through scheduling are the areas emphasized. AFGWC supports the ranges by providing 0-36 and 24-48 hour forecasts.

*To allow TAC commanders to better understand and use their weather support people, 5WW developed a special "Commander's Guide."

*A comprehensive 5WW readiness study was completed. Deficiencies were identified and changes are now being made.

*The 5WS significantly upgraded the readiness and quality of weather teams supporting U.S. Army combat forces.

*In 1976, 5WW units supported 28 TAC unit movements, 17 special missions and several exercises. The exercises included Crested Cap, Scarlet Bear, Elegant Eagle, Brave Shield, Orbit Phantom, Red Flag, Blue Flag, Jack Frost, Bold Eagle, Pole Vault and Solid Shield.

Seventh Weather Wing

*In addition to the MAC WSU working a number of exercises, such as Scarlet Flag and Elegant Eagle, it also provided support for earthquake relief efforts in Guatemala and Turkey.

*The wing implemented standard procedures for providing significant meteorological information to MAC crews.

*A weather support plan was developed, tested and implemented for the AF Rescue Coordination Center, Scott AFB, Ill.

*In view of MAC's continuing concern over turbulence, the 7WW is evaluating a clear-air turbulence detector. Final decision on feasibility of adopting such a detector for MAC aircraft was expected to be made in late January 1977.

Air Force Global Weather Central

*AFGWC's Production Division prepared specialized environmental support products in response to four disaster relief operations. Additionally, specialized products were provided for three national military contingencies, 30 major military exercises and 12 operational Air Force missions in 1976.

The products included forecasts and outlooks for flight routes, areas and terminals throughout the world. The involved activities ranged from one-day missions to operations lasting several weeks.

*AFGWC support to SAC ORI was significantly improved in 1976. New support procedures, including use of the Automated Weather Network (AWN) for dissemination of planning forecasts and weather facsimile for relay of execution forecasts, began with the August-December ORI cycle.

The chief advantage of the system is increased timeliness of weather support products for the SAC mission. New procedures were instituted whereby AFGWC provides the execution forecast for special missions in facsimile chart form, rather than in a teletype bulletin form. The procedure reduces the AFGWC workload.

*The point analysis program still gets considerable attention. A project to assess the errors in eastern hemisphere radiosonde humidity soundings generated a moderate amount of work.

A conference on the point analysis program took place at Offutt AFB, Neb., on Mar. 9-11. From the conference it was recommended that an ETAC-developed moisture model be included in the operational point analysis program run at AFGWC and ETAC. As a result of the conference, the point analysis program had few problems during the last six months. An extensive quality control program between AFGWC and ETAC was kept up to make the point analysis results in both units identical.

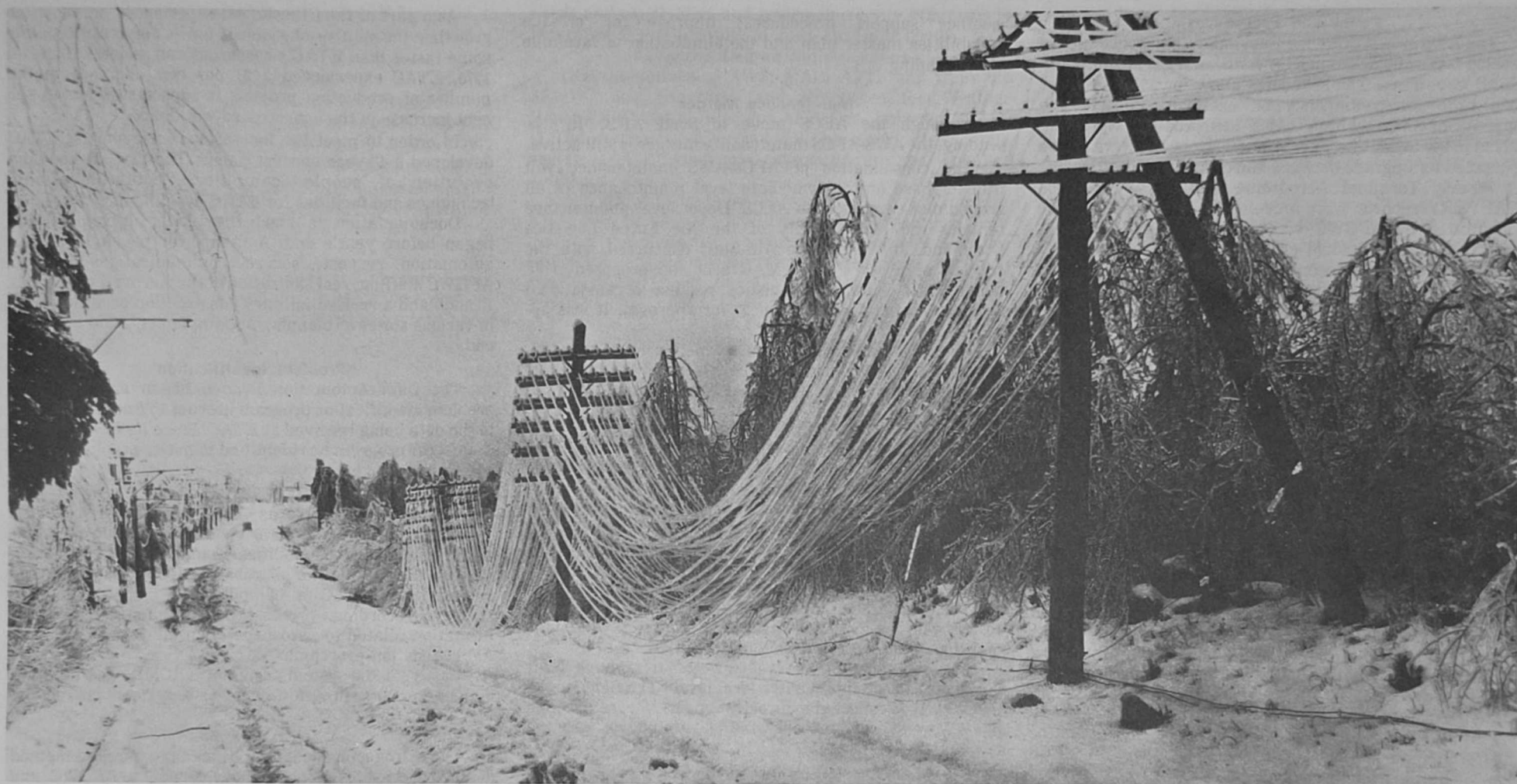
*ETAC took part in a study to develop an operational, dynamic cloud free line of sight (CFLOS) model which can determine the probability of experiencing a CFLOS between two moving points for a specified length of time.

*Twelve studies of the suitability of different locations for various purposes, such as finding an optional humid tropical environment in which to test the F-15, were completed by ETAC.

*To support the Single Integrated Operations Plan, ETAC provided tailored upper-air analysis climatology for the Northern Hemisphere to SAC and the Joint Strategic Target Planning Staff and the Atlantic and Pacific combat commanders.

*To assist the Air Force determination of areas where winter clothes are required, ETAC provided it equivalent wind chill information pertaining to 137 locations.





II MANAGEMENT ACTIONS

EQUIPMENT PROGRAMS

Hqs. AWS initiated 15 major programs in 1976. They include complete instrumentation and major equipment installation, such as GMQ-13 ceilometers and FPS-77 weather radars. Four of these were approved by the Air Staff and 10 are now being coordinated, either at AFCS, other major air commands or the Air Staff. Also initiated were 48 minor programs which relate to removals, relocations and minor installations. Of the 48, 26 have already been approved and 22 are still being coordinated—with no anticipation of disapproval.

Intercept

Headquarters USAF approved Communications Electronics Implementation Plan (CEIP) for the upgrade of USAF weather intercept equipment in the European and Pacific areas.

Equipment Turn-in

Directorate of Environmental Sensors (AWS/DOS) initiated turn-in action to eliminate the MMQ-2 Manual Met Station and the TPQ-11 Cloud Detection Radar from the AWS inventory.

BWS Renovations

Dover AFB, Del., McGuire AFB, N.J.; and Travis AFB, Calif., BWSs were involved in renovations as part of base operations projects. At Altus AFB, Okla., the BWS will move into the new base operations building around May 1977. At Richards-Gebaur AFB, Mo., a catwalk was installed atop the base operations building to give weather observers a better view of the area.

Relocations

Observing sites at Dover AFB and McGuire AFB were relocated to the BWSs. These moves effectively reduced manning by five people at each location.

In Europe, the 2WW pursued the elimination of separate Representative Observation Site (ROS) and BWS work centers to the maximum possible extent. Programming is underway for relocations at Katterbach, Spangdahlem AB, and Coleman Barracks, Germany; and RAF Mildenhall and RAF Upper Heyford, UK. Further, 2WW expects to initiate programming action requests soon for relocation at Grafewoehr and Fulda, Germany, as well as at RAF Bentwaters and RAF Lakenheath, UK.

Facility Revision

Since the ROS relocation program has left many units with inadequate observing sites in the BWSs, 7WW worked with Headquarters AWS to revise the standard USAF facility drawings to insure adequate BWS observing facilities in the future.

COLD FOG DISSIPATION SYSTEM

The 2WW cold fog dissipation system (CFDS) installed at Det. 14, 31WS, Hahn AB, Germany, in 1969 was removed last summer. The CFDS there gave valuable data about the limitations of ground based cold fog dissipation, but was not favorably viewed by the 50th Tactical Fighter Wing and USAFE in terms of operational support. During the years of Operational Test & Evaluation (OT&E) and operational use, the CFDS assisted 18 aircraft movements at Hahn AB.

FACILITY IMPROVEMENTS

AFGWC Move

AFGWC moved into a new 28,000-square-foot addition at Offutt AFB, Neb., in August.

ETAC Grows

In order to solve a critical space problem in its present building at Scott AFB, Ill., ETAC asked for more building space. The integration of the AWS-ETAC libraries made the library space inadequate and \$40,000 worth of new cabinets and shelves helped, however, crowding was still a problem. At year's end, 1976, the base gave ETAC 600 square feet in a neighboring building. With the additional space, the problem is but partially solved.

Computer Space

A \$4.5 million Military Construction Program (MCP) was sent to MAC for new office space and computer room for ETAC's projected requirements. MAC's deputy chief of staff for Engineering and Services consolidated the ETAC requirements with those of MAC's deputy chief of staff for Command Data Operation. The total estimated cost of the joint MCP is now \$8.5 million.

SOLAR OPTICAL OBSERVING NETWORK (SOON)—RADIO SOLAR TELESCOPE NETWORK (RSTN) PROGRAMS

Far East Surveys

A series of initial site surveys for a SOON-RSTN observatory in the Far East were performed.

OT&E of SOON Telescope

Follow-on OT&E of the AN/FMQ-7 (SOON) telescope at Palehua, Hawaii, began last year.

SOON Conference

AWS/DOS chaired the first SOON Data Collection and Archival Conference to allow participants, military and civilian, to define and specify their needs related to SOON data.

Telescope Contracts

Contracts were let for construction of the radio solar

telescopes. The first FRR-95 Radio Interference Measuring Set (RIMS) is now in production.

PUBLICATIONS, POLICY AND PROCEDURES

Publications

A new evaluation directive which consolidates the essential elements of AWSR 105-6, "Produce Evaluation Program," AWSR 105-38, "Operational Effectiveness Program," and AWSR 178-1, "Value Analysis," was drafted. The new directive, "Evaluation Program," was still being coordinated at year's end. Consolidation of directives, such as this step, continued as AWS policy during 1976.

AWSP 178-2 was revised and retitled "Applications of the AWS Evaluation Program." The pamphlet contains detailed instructions for units to use to conduct operational verification and value analysis. It also was being coordinated at year's end.

The reconnaissance weather code (RECCO), in support of weather reconnaissance, and which provides implementing information, is now in final rewrite. The rewrite consolidates all weather reconnaissance observing procedural directives into one publication. Additionally, it recognizes ARRS manning problems and requests change to AFR 39-11 as the first step in implementing the single career concept in weather reconnaissance.

AWSR 25-1 was revised and published to upgrade the Management Information System (MIS) program. The data automation request for the revised MIS is expected to be approved by MAC's deputy chief of staff for Command Data Automation.

Map plotting guides as visual aids (AWS VAs 105-2 through 105-11) AFR 23-31, "Mission and Organization of AWS," and AFR 105-6, "Military Weather Service," were sent in draft form to Headquarters MAC at year's end.

Also this year, AWSR 23-3, AWSR 23-45, AWSR 23-20, MACR 23-45, MACR 23-54 and FMH-1B were revised.

New Publications

AWSR 23-3, "Organization and Mission of Data Acquisition Units," AWSR 23-4, "Mission and Organization of AFGWC," and AWSP 50-6, "Army Staff Officer's Guide" were originated and distributed.

A handbook which consolidates all Technical Consultant Visit (TCV) guidance into a single reference for technical consultants and fills a void created when AWSP 105-6 was rescinded, was created. The rescinding of AWSP 105-6 left consultants without guidance. The TCV guidance was provided to AWS and its wings.

Policy and Procedures

The AWS 1976 Worldwide Facsimile Conference met to develop facsimile schedules for AWS' new 240 scan-minute (SPM) capability. The schedules allow for 25 per cent of open time for contingency or exercise support. The majority of SAC facsimile (AFX-109) products were converted to 240 SPM. The Pacific and European aircrews are scheduled for upgrade between March and June 1977.

Weekly Terminal Aerodrome Forecast Verification (TAFVER) reports were developed. The reports were transmitted by AFGWC via automatic digital network (AUTODIN) to individual production units.

TAFVER monthly summaries were revised to provide more information to unit, squadron and wing technical monitors. Additions included precipitation verification and separate verification data for ceiling and visibility forecasts.

In Europe, 2WW initiated several actions to improve maintenance support and reduce leasing costs. The actions include elimination of German commercial tie points where possible, use of Defense Communications System (DCS) circuitry and technical control facilities. The project is expected to result in significant improvement in troubleshooting communications problems as well as providing an annual savings of as much as \$11,000 on circuits.

In the early part of 1976, aircrews returning from the South American capital run said weather support as prescribed in the contract with Braniff Airways was inadequate. Det. 3, 7WW, Charleston AFB, S.C., advised standardization-evaluation people and aircrews of the service, which is due under the contract, then established a feedback system to evaluate the provided service. As a result, weather support steadily improved. By November, Braniff Airways was abiding by the contract.

An AWS WWMCCS Conference took place at the AFGWC in September. It brought together WWMCCS support people from throughout the world. After specialized briefings on the future of WWMCCS and its communications, the conference produced valuable interchanges among command representatives in relation to plans, viewpoints and problems associated with WWMCCS weather support.

MAC Management System

A project to automate the link called the Environmental Interface between the AWS Centralized Production System and the MAC Integrated Management System (MACIMS) began in the early 1970s. The Environmental Interface should develop in four phases. A major milestone was passed with the publication of the functional description (FD) for Phase-I on Dec. 1, 1976. The milestone culminated more than two years of effort.

Other Actions

Other actions last year included improved monthly update of organizational actions to AF which eliminated wing actions; consolidation of C-141 and C-130 airdrop

weather support procedures; improvement of the capabilities master plan and the elimination of facsimile chart grading.

Maintenance Merger

Although the AFCS move to Scott AFB, Ill., is pending, the AWS-AFCS maintenance merger is still active.

The consolidation of AFCS-AWS maintenance will transfer base and intermediate level maintenance of all ground met equipment to AFCS. Depot level maintenance remains the responsibility of the Air Force Logistics Command. In August the Air Staff concurred with the concept of consolidation. MAC sent the proposed AWS deputy chief of staff for Logistics' residual organizational structure to the Air Staff Oct. 27 for approval. It was approved Nov. 23.

The joint MAC-AFCS plan, which should save approximately 94 manpower spaces, went to the Air Staff Nov. 8 and now awaits a decision.

PROJECTS

Weather Support

Within Headquarters AWS the System Work Groups (SWG) were active. Weather Support Plans (WSPs) were drafted or prepared for the F-15, E3-A, B-1, Space Transportation System (STS), TV-Guided Maverick guided missile and the Over-the-Horizon Backscatter (OTH-B) prototype radar system. WSPs are now being prepared for the E-4, A-10, F-16 and remotely piloted vehicles (RPV).

The AWS Council approved a new SWG membership roster. For the first known time it allowed SWG chairmanships from outside Headquarters AWS.

Key individuals who are expected to provide Staff Weather Officer support at the local level were added to the SWGs 7WW is expected to directly support. Representation by 7WW was added to SWGs working with the B-1, Airborne Command Control Systems, RPV and STS.

Weather Communications

The most significant event of the year in the AWS Directorate of Communications Requirements was implementation of the COMEDS. We monitored, coordinated and assisted the management effort for this multimillion dollar nationwide upgrade, which took place within the scheduled guidelines of the contract with Western Union. We have not yet had a single customer in the network express dissatisfaction.

The Satellite Imagery Dissemination System (SIDS) was implemented in Korea. A concept to support the 485L automated tactical control system is being developed and MAC expressed interest in an aircraft-to-satellite data relay system. AWS support planning was revised and new plans to use satellite receiver assets and allocation of existing radar assets were written.

ETAC Experiences

"Do more with less" is the objective at ETAC and one of the best ways to accomplish it is by means of a centralized production system (CPS).

As a part of the CPS, ETAC experienced an explosive growth in the number of requests for its services. Requests come faster than ETAC's resources can process them. In 1976, ETAC experienced a 21 per cent increase in the number of production projects it supports and a 43 per cent increase in the unprocessed workload.

In order to meet the increased requirements, ETAC developed a 10-year concept paper. The plan outlines the evolution of people, computers, communications, techniques and facilities for ETAC over the next 10 years.

Documentation to start the plan's implementation began before year's end. A manpower package, a data automation request, secure communications link to AFGWC staffing, reorganization of the Aerospace Sciences Branch and a revised military construction program were in various states of planning and implementation at year's end.

Problem Identification

The Data Automation Branch began an automated problem identification program in order to find class errors in the data being received at ETAC. Since its inception last August the program has identified 15 major problems in the data base.

WORLD PROJECTS

The 2WS, in its role as AFSC representative, made substantial progress in 1976 on the joint environmental requirements and capabilities management information system (ERCMIS). The purpose of ERCMIS is to provide Headquarters AFSC a computerized format for cost-effective recording, processing and maintaining of information related to aerospace environmental support to AF acquisition programs.

Last year the system design of ERCMIS was finalized and the computer programming was 80 per cent completed.

Astro Data Base

The astrophysical data base, an automated method of ionospheric analysis, was developed by AFGWC and implemented in January.

Data Processing System

Last September 7WW received a Monroe 325/395 data processing system and began design and development of software for it.

The first production version of the new system has already cut in half the time needed to process monthly TAFVER verification statistics. Future enhancements to the system will allow all verification statistics for a particular unit to be stored on a tape cassette, readily available for automated summarization and processing.

Additionally, the statistical software package provides capability to quickly analyze weather data for pilot studies and promising forecasting techniques.

TAFVER

TAFVER, a program to establish a centralized and efficient method of Terminal Aerodrome Forecast (TAF) verification, became operational in May. Three months later AWS Operations concurred with a 1WW request for receipt of weekly data to identify errors with TAFVER. Throughout August and September correspondence among 1WW field units, AWS Operations and AFGWC tried to solve problems and coordinate individual unit and mutual efforts.

A preliminary problem identification was made by AFGWC and a fix in the decode problem of the Fuchu AS, Japan—Carswell AFB, Tex., data link was begun. The number of TAFVER problems was greatly reduced in October and November.

Transmission errors during November and December at two 1WW units cost them TAFVER points. An article was prepared for the wing's bulletin stressing the importance of quality control of TAF transmissions.

During the last two months of 1976 1WW sent two recommendations pertaining to TAFVER; one was a request that AWS Operations and 1WW's receipt of weekly data after a six-month debugging period and the other was to add 1WW's Operations as an information addressee on one specific unit's weekly report to enable the wing to closely monitor a technical problem.

Another request, to AFGWC, recommended changes to the data in TAFVER weekly summaries.

SAC System Plan

An input was prepared for the SAC Command Control System Master Plan. It outlined current environmental support methods to the command control system. Further it outlined limitations and deficiencies of the methods and delineated envisioned future support methods.

The plan was reviewed by the Joint Chiefs of Staff (JCS) and was approved in concept. The JCS also indicated that the submission of a WWMCCS Operational Requirement (OR) for elimination of limitations and deficiencies may be in order.



A draft WWMCCS OR was prepared. Subsequent to 3WW coordination, the OR will go to AWS Systems and SAC for further coordination and submission to the JCS.

Space Transportation

The 7WW, as MAC Operations weather directorate, was named to an ad hoc working group to prepare the MAC input for a DOD symposium on the STS in January 1977. The major vehicle in the STS will be the space shuttle.

The working group is chartered to examine all possible uses for the STS in MAC and develop a concept of operations if MAC became the manager and operator of the STS.

AIREP

The 7WW also developed a standard Aircraft Report (AIREP) format and submitted it to MAC. The development was recommended by several MAC bases for 24-hour on-site forecasting.

Air Quality Monitoring

Most of the 2WS' involvement in air quality monitoring centered around the Air Force Air Quality Assessment Model (AQAM).

During the year the AQAM was applied to three Navy bases and 10 Air Force bases to determine the impact of jet engine test cells and the A-10 and F-15 on air quality in the surrounding communities.

Staffmet efforts helped define the accuracy limits of the AQAM and insure adequate pollution sampling and meteorological data was available for each case at year's end. The number of requests for AQAM applications rose and staffmet involvement intensified.

Centralized Data Intercept

Det. 7, AFGWC, Carswell AFB, Tex., began centralized data intercept targeting during February 1976. The net result was a six per cent increase in Sino-Soviet data to the AFGWC data base and a 30 per cent reduction in duplicate data (category three).

COM Forecast Standardization

Last year a plan was developed which will permit termination of trend forecast support to the ADCOM as of the COMEDS completion on April 1, 1977.

The 12WS provided the lead in this successful planning effort, including formulation of new support procedures. The procedures included maximum use of existing AWS forecast products.

A significant reduction in duplication of effort by AWS units, and associated possibility of disagreement between forecast products for the same location, will be realized. No degradation in ADCOM support is anticipated.

Deployment Kit Data

SAC wing weather officers may be required to deploy worldwide to support SAC units during contingency operations. To assure appropriate climatological data are available for deployment kits, an effort is underway to identify locations of interest during contingencies. Additionally, the deployment kits will be provided updated weather data for the locations.

Constant Generation

The forecast constant generation program had significant errors which now are identified. There were two parts to the effort.

The first portion was justified in detail to SAC and the responsible contractor. Corrective steps are now being taken.

The 3WW is still working the second part. Details of the program are classified but are available to authorized people through AWS' centralized systems management division.

TRAINING Inter-Service

Subgroups 420 and 109 of the DOD Inter-Service Training Review Committee met at Chanute AFB, Ill., from Mar. 1-4, 1976. The committee was to determine the feasibility of consolidating all weather courses. Subgroup 420 considered observer and forecaster courses. Subgroup 198 considered weather equipment maintenance courses.

The plans of the working groups were considered by several review boards and final approval for consolidation will be considered by a two-star board between Jan. 25-26, the consolidation is expected to save DOD and Air Force training dollars.

Met Symposium

AWS hosted a meteorological symposium between May 18-20, 1976. The symposium was attended by representatives of the Air Force Institute of Technology (AFIT) and chairman of meteorology departments of universities which train and educate our weather officers.

The symposium was to increase understanding of the AWS mission, discuss possible theses topics of interest to the Air Force, exchange information concerning AWS

needs and capabilities and review university programs to determine their capability to meet Air Force needs.

Advanced Degree Authorizations

Representatives of AWS, MAC, AFIT and from the AFMPC and Programs and Resources for Weather (USAFPRW) met at Randolph AFB, Tex., between July 11-17. The weather panel accounted for all advanced academic degree (AAD) positions authorized in the weather utilization area.

Action was taken to downgrade the AAD requirements for 15 doctoral (Ph.D.) positions to master degree. There are now fewer than 50 validated Ph.D. positions in the lieutenant colonel or below ranks. Colonel Ph.D. positions are not controlled by the AF Educational Requirements Board.

Allied Prep Course

To better understand the U.S. Army requirements for weather support, AWS obtained eight quotas in the Allied Preparatory Course for the Army Command and General Staff College. The course is designated Army Weather Orientation Phase II. It is a two-week course to provide orientation to newly selected detachment commanders and staff weather officers who support the Army. AWS's involvement was successful and quotas for 1977 are expected. The course will be attended by new Army SWOs.

Enlisted Training

AWS' Operations developed and staffed the future training program for the enlisted force for the AWDS era. The program allows for training of airmen to operate within the BWS as observer and forecaster upon initial entry into the career field.

Pacific Limitations

The 1WW developed special examinations covering the weather limitations of Pacific Air Forces (PACAF) aircraft for forecasters. The wing also provided the

PACAF Inspector General (IG) severe weather scenarios which were evaluated during unit inspections.

Weather Hazard Training (for MAC aircrews)

As a result of a weather-related C-141 accident, MAC placed renewed emphasis on weather hazard training for its aircrews. The 7WW is working with AWS and MAC Operations to develop new training materials for the aircrews.

At the same time, AWS Operations is preparing materials on the same subject to be used by weather units which support MAC. A technical note on low-level wind shear, now nearing completion, will be the first of the efforts.

Looking Ahead

Many 7WW units began a program to train weather observers to prepare them for future forecasting duties. Comments from the units related to the training were sent to AWS to be used during preparation of a formalized program.

Weather & Crew Training

MAC support units are now seeing, first-hand, how weather supports the flying wings' mission.

One unit has its forecasters ride in the C-5 simulator. Another unit has forecasters fly combat airlift missions and observes them from the ground. Improved communications and tailored service resulted.

Extensive efforts were made to insure that aircrews and senior staff officers understand that "CB" and "thunderstorm" mean the same in relation to in-flight hazards. Directives were clarified to make avoidance criteria applicable to CBs and thunderstorms.

As an added step, 7WW BWSs issue short quizzes to aircrews as an education tool and briefed the subject during flying safety meetings.

MAC Operations Briefing

All MAC directors of Operations, down to wing level, were briefed by 7WW during an operations conference. The briefing included such subjects as current MAC weather support, capabilities and limitations and programs for future MAC support.

Also included in the briefing were the subject of ROS relocations, single career ladder, reduction in forecaster hours of operation, AWDS, the Kansas City ARTCC and Advanced CFP. Other topics were MSIs, lightning warning sets, warm fog dispersal, advanced weather radar and the low altitude wind warning system.

Pacific Problems, Solutions

PACAF ORI and MAC IG scenarios, which are mainly event-oriented, are not a valid appraisal of readiness. The 1WW developed a readiness program to use during staff visits to identify shortcomings and help correct problem areas. The wing's scenarios are built around the most likely war plan that would involve the unit. The program can be tailored to the unit visited.

SELECTIONS AND REORGANIZATIONS

Radar Eval Team

Several new units and responsibilities appeared in AWS last year. One was the AWS Radar Evaluation Team consisting of AWS Operations and Logistics members.

Since last May the team evaluated 10 FPS-77 weather radars. The two major problem areas identified are inadequate training and lack of proper test equipment with appropriate alignments.

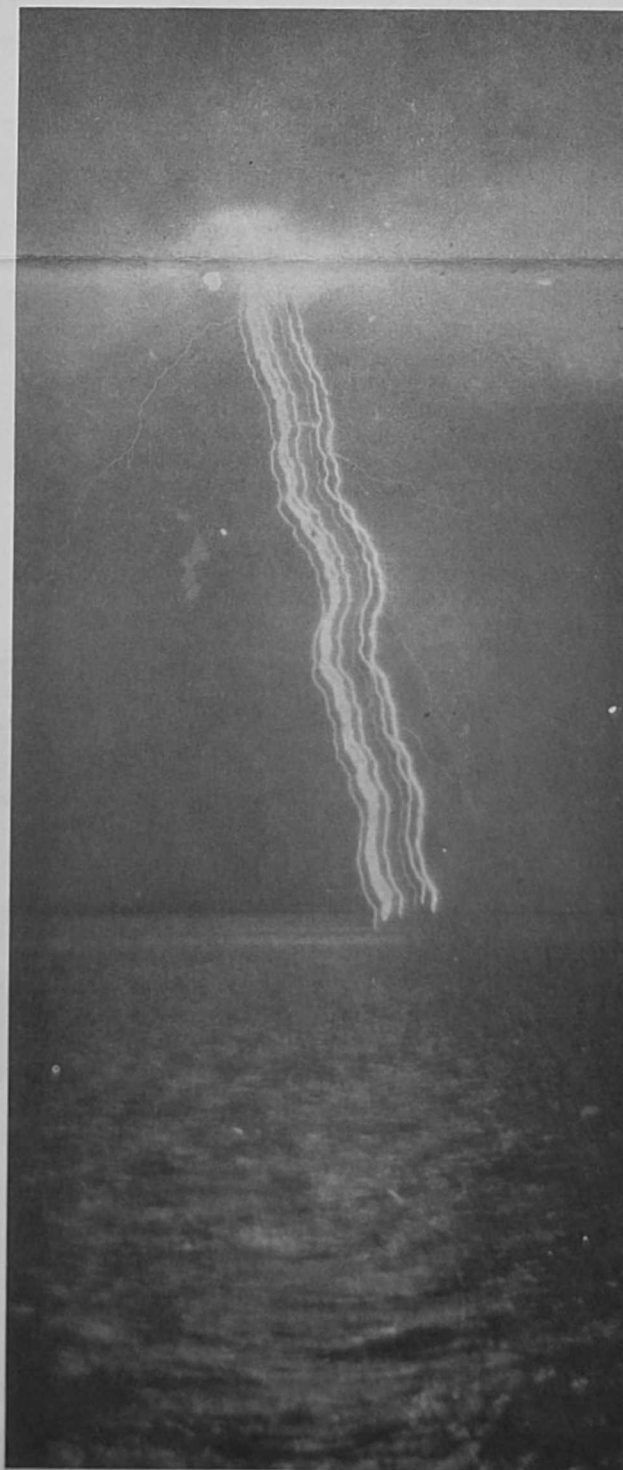
Required test equipment is now authorized and alignment procedures are being prepared for publication. Also, the ATC course is being revised to include proper training.

The radar calibration team now has test equipment to measure and quantify parameters of the system which are beyond organization and intermediate maintenance capability. The team can calibrate FPS-77s to the accuracy needed to quantify the severity of meteorological echoes. The three-man team needs four to five days at a station to complete calibration procedures.

Kirtland AFB Staffmet

An AWS-AFGWC-2WS plan sent the 2WS commander to the Air Force Test and Evaluation Center (AFTEC), Kirtland AFB, N. Mex., last summer. At that time agreement was reached to assign a staffmet there to support AFTEC. This is particularly important since AFTEC is a separate operating agency of the Air Staff and is dedicated to independent testing and evaluation of weapons systems before they are purchased.

The staffmet will help insure that environmental effects are properly considered. He or she will help alert 2WS of weather requirements when it reaches the inventory. The staffmet will also coordinate with AFSC staffmets and major air command SWOs during the test and evaluation process.



Young Managers

What is now known as the production division of AFGWC grew in an explosive but piecemeal manner over the last several years. The job gets done on a daily basis but the various parts could not consider the whole.

It was recognized that unless something was done, manpower intensive tasks would grow, leading to ineffective use of hardware. For this reason, in August, AFGWC began a planning function briefing using the unit's best young, but expert, officers. The planning function is guided by a steering group from the unit's Operations, Sciences and Production divisions.

The team will define options available for improved customer support through increased productivity and scientific techniques.

Worldwide Repair

The 6WS became the worldwide repair facility for rawinsonde equipment last year. The action enabled five mockups to be turned in and added to the 7WW's cost reduction actions.

NCO Detcos

To afford noncommissioned officers more prestige and responsibility an AWS program of enlisted commanders (detco) at 10 per cent of AWS' detachments was established.

RECON & Savings

AWS had a highly successful year in the area of resources conservation (RECON). As a result of more than \$9,194,200 new or improved management actions, AWS achieved the highest savings of all MAC technical services. Additionally, three of the 10 best management actions in MAC were submitted by AWS.

Cold Miss

AWS Operations coordinated a letter of agreement with the ARRS which resulted in Det. 4, 1WW, Hickam AFB, Hawaii, taking primary Cold Miss weather reconnaissance observer support responsibility. This action, in conjunction with piggybacking the Det. 4 weather reconnaissance observer on already scheduled AFSC planes, eliminated the need for routine ARRS support and was validated as a \$2.7 million RECON savings.

Top Savers

Final FY 76 and 7T validated savings put the 1WW at seven times its goal and 300 percentage points ahead of its closest competitor, the 7WW. Total savings for the fiscal year were more than \$1,800,000—more than twice the total wing operating budget for the same period. As a result, 1WW received the RECON Program Award Plaque for category VI.

The 7WW achieved 399.4 per cent of its RECON goal to claim second place in AWS RECON achievements.

Third place in AWS for RECON went to the 5WW for its 108 actions, which saved \$744,700 or 331.7 per cent of its \$233,600 goal.

The 2WW had \$740,000 in RECON savings or 283.6 per cent of its goal.

Customer Savings

ETAC continued to save money for its customers. It demonstrated customer savings of more than \$6,000,000 last year. The savings resulted in a 15-1 benefit to cost ratio for ETAC's services.

Mission Savings

AWS Operations revealed the cost effectiveness of AWS support to certain AFSC, SAC, Alaskan Air Command and PACAF missions by documenting customer net savings of \$14,261,695 in the value analysis program.

Savings by Contract

At Thule AB, Greenland, and in conjunction with the ADCOM, AWS has a contract with the Danish Arctic Contractor (DAC) to provide Thule weather services. By this means weather service is provided with fewer people. Contract negotiations with DAC took place last May and has resulted in a \$61,000 Air Force savings.

Plotting Chart Savings

AWS Operations eliminated the need for five new DOD weather plotting charts (WPC), with a potential cost of \$29,622, and deleted five existing DOD WPCs.

III

EQUIPMENT AND TECHNIQUES

AWS worked closely with the AFGL on a demonstration of a modular automated weather system (MAWS). Scott AFB, Ill.'s BWS is now testing an AFGL MAWS. Installation of Scott's MAWS began during the last part of 1976 and is expected to be completed early in 1977.

The heart of the system is a collection of sensors which automatically measure many elements of a surface weather observation (wind, temperature, dewpoint, visibility, cloud height and pressure) and feed the data into a computer to be processed and displayed. An unusual feature of MAWS is its ability to produce automated short-range forecasts for periods of up to three hours. The result of the Scott test will set the stage for the future development of the Automated Weather Distribution System (AWDS).

Warm Fog System

Another system being field tested is the Warm Fog Dissipation System (WFDS). Ramstein AB, Germany, is the site selected for prototype installation of the AFGL's WFDS. A 150-foot instrument tower was erected at Ramstein during October and November. It will be used to sense winds and visibility in fog. Det. 2, 2WW, will support the tower operation by changing data tapes, sending them to AFGL and performing minor maintenance as needed. Plans call for the prototype WFDS to be installed before the 1980-81 fog season.

Technical Needs

Four new technical needs (TN) were documented and sent to AFGL for solution. The new TNs express a need for an improved helicopter icing forecast technique, an improved climatology of ice accretion for engineering design applications, automated short-range terminal forecasts driven by the automated sensors of the AWDS, and improvements in the radar program.

One TN, involving processing of satellite data, was completed this year in time for use with the DMSP Block 5D data.

Satellite Accomplishments

For the last three years AWS has continued to modernize DMSP ground stations so they can receive data from the new generation Block 5D-model satellites. The complete program, including training of technicians on the modified gear, was completed in September.

Block 5D

The first DMSP Block 5D spacecraft was launched Sept. 11 from Vandenberg AFB, Calif.

Studies are underway to determine the feasibility of modifying the DMSP equipment so data from NOAA satellites can be received and processed.

We can report that in November Det. 1, 11WS, completed the first successful attempt by an AWS DMSP site to receive and process NOAA meteorological satellite data. The effort cost less than \$100.

Other DMSP Projects

Work progresses on installation of a Geosynchronous Orbiting Environmental Satellite receiving and processing

facility at AFGWC. A 30-foot antenna was salvaged from Nakhon Phanom RTAFB, Thailand, and overhauled. Completion of the project is scheduled for June 1977.

A DMSP antenna is being installed at Hickam AFB, Hawaii, and the new facility there should be in operation by March 1977.

DMSP satellite imagery dissemination systems are planned for Europe and Asia, too. The systems will provide near real-time DMSP imagery to weather stations not served by live satellite receivers. Both systems should be operational by early 1977.

Solar Physics

AWS, in conjunction with the solar research branch of AFGL, began a technique development project to consider solar flare prediction. Work on the project is based on new and greatly improved data available from the AN-FMQ7 telescopes of the Solar Observing Optical Network (SOON). The goal of the technique development project is to create a solar flare prediction capability, which has always eluded solar physicists.

New Hardware

Some important developments involve new hardware for centralized production centers. The joint computer upgrade between ETAC's OL-A, and the National Climatic

Center, both located at Asheville, N.C., is proceeding smoothly.

Specifications and a draft request for proposal (RFP) were developed by a joint OL A-NCC working group. Responses to the RFP are expected in the second quarter of fiscal year 1977 with system installation planned for the first quarter of fiscal year 1978. The upgrade will provide both units with more than double the present computational capacity at a lower cost than today's operation.

New Computers (AFGWC)

Two new UNIVAC 1110 computer systems were installed at AFGWC last year and a third system was upgraded from a UNIVAC 1108 to a UNIVAC 1110. These computers required 5,600 square feet of new space which was constructed.

IPADS

AFGWC developed the Interactive Processing and Display System (IPADS) last year. The unit now uses the equipment to produce all military weather advisories, horizontal weather depictions and to modify cloud data bases.

Other GWC Improvements

There were significant improvements at AFGWC in addition to hardware upgrades. Some of these were a five-

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layer cloud model featuring more realistic handling of trajectories and the AWS primitive equation model enhancement by extending the AWS primitive equation forecast capability to 72 hours in March and to 96 hours in December.

Others were a spectral analysis model, implemented in September, which provides a single global weather analysis with a much improved horizontal and vertical consistency; and all data for surface observations and forecasts reformatted into WWMCCS compatible code.

Other Progress

AFGWC continues to work toward an advanced computer flight plan (CFP) system. The ultimate goal of the system is to meet Air Force minimum fuel CFP requirements.

The severe weather warning procedures used by AFGWC were modified. Specific changes included an increased frequency of military weather advisories, a decrease in standard AFGWC point warning lead time from two hours to one and a half hours, and addition of probability statements to AFGWC point warnings.

Data Developments

We saw many new developments in data communications in 1976. The first COMEDS became operational Jan. 1. Fourteen of the 19 COMEDS loops are now operational. Additionally, COMEDS expansions to Hawaii and NORAD installations were approved by the Air Staff for early 1977.

Our manual weather relay centers (MWRC) are fast disappearing. With the closing of the Diamond Head MWRC, all Pacific AWN circuits are controlled by the Automated Digital Weather Switches (ADWS).

The RAF Croughton ADWS upgrade was virtually completed in 1976, paving the way for elimination of three European MWRCs this year. A new weather intercept was established in Alaska.

The Alaskan teletype network was upgraded and automated polling procedures implemented.

The Pacific facsimile system had an extensive line upgrade and received new datalog DL-19W equipment.

European locations will switch from the present facsimile to the datalog equipment during the first half of 1977. The Weather Facsimile Switching Center (WFSC) was implemented at Offutt AFB, Neb. The WFSC consists of three minicomputers that operate all the facsimile networks emanating from AFGWC.

Upped Customer Service

We also increased our capabilities to provide timely weather information to our customers.

The weather communications terminal at Det. 1, AFGWC, Washington, D.C., was upgraded. As a result, real-time automatic-response-to-query and direct data from the AFGWC data base is available to support the National Command Authority and the National Military Command System. We tested a high frequency (HF) facsimile broadcast of AFGWC products to European units during Exercise Reforger 76 and provided HF teletype broadcasts during Exercise Brave Shield XIV.

Weather Radar

Efforts to improve our ability to use weather radar continue. A radar training film was completed and sent to the field. The film highlights radar fundamentals, operations and severe storm identification using the FPS-77 weather radar.

The Severe Storm-Radar Seminar was revised last year. AWS joined forces with the National Severe Storms Laboratory, NWS and AFGL to develop doppler radar techniques. AWS initiated negotiations with NWS for joint development of an advanced doppler weather radar and an operations concept was developed.

Probability Forecasting

Probability forecasting was spotlighted in 1976. In April, AFGWC began adding probability values to their Point Weather Warning and an Aerospace Sciences Review article provided details about how to use probabilities to support customers.

The routine use of an MSI for aerial refueling visibility forecasts was begun in September. A complete MSI package was developed and used to support Exercise Reforger 76. The Reforger 76 test demonstrated that probabilistic decision assistance, in the form of MSIs, prepared far from the battle front, could be delivered to command and control elements in a battle zone. This pioneer effort could be a forerunner of expansion of the MSI program into many aspects of AWS support.

New Techniques

Many other new techniques were developed by AWS last year. A few samples of the new techniques are:

*A study entitled "Analysis of the AFGWC Boundary Layer Model's Capacity to Detect and Predict Anomalous

Propagation as It Affects Troposcatter Communications," will be published as an ETAC technical note.

*A case study of the Altus AFB, Okla., tornado was completed and published in the "Aerospace Sciences Review."

*Two studies that consider midwest winter storms were completed and published as 3WW technical notes.

*Dewpoint stratified conditional climatology tables

were produced for Travis AFB, Calif. These tables should be an improvement over existing climatological aids.

*An electro-optics handbook will soon be completed. It will be a primer on the atmosphere's effects on precision-guided munitions.

*The 5WW published a pamphlet (105-7) for its forecasting units pertaining to the use of National Facsimile Network products in August.

IV

INTRA-AGENCY ACTIVITIES

An earthquake, which measured 6.9 on the Richter scale, rocked northeast Italy May 6, 1976. Aviano AB was spared disaster, but nearby towns and villages suffered extensive devastation.

Det. 7, 31WS, became the weather support unit for the U.S. State Department's earthquake relief command post, 40th Tactical Group disaster preparedness cell and the Army's 6th Aviation Detachment.

Det. 7 provided 24-hour-a-day weather support to the air and ground relief efforts as well as Vice President Nelson Rockefeller's May 13 visit to the disaster area. The vice presidential visit came during extensive rainstorms with embedded thunderstorms, but Det. 7 provided continuous meteorological inputs to the Secret Service for surveillance and route selection.

Additionally, Det. 7 people helped townspeople collect and deliver supplies, clear debris, secure personal valuables and move equipment and records from the fallen townhall.

Accident

A second incident was an explosive ordnance device (EOD) accident at a tactical range which destroyed several thousand acres of national forest. Following the accident 5WW began a program to integrate weather information into EOD operations. The accident revealed a need for local fire protection agencies to work closely with BWSs to recognize fire weather hazards and increase fire protection during needed periods.

1976-1986

In early 1976 AWS had a major role in the development of a statement of "Space Environment Support Needs for the U.S.—1976-1986."

AWS' needs were combined with those of other Department of Defense (DOD) and civil agencies involved in space environmental support by the Joint Committee for Space Environmental Forecasting (JCSEF). JCSEF then published the national needs in May.

Improved Cooperation

Improved coordination with the environmental research and development community was a primary objective last year.

A joint AWS-Army Atmospheric Sciences Laboratory (ASL) and Air Force Geophysics Laboratory (AFGL) meeting took place at Scott AFB, Ill., last spring. During the meeting each agency pledged to exchange information and eliminate duplication of effort.

It was agreed that AFGL would send technical need for improved rotary-wing icing forecast techniques to ASL as a first step toward increased cooperation.

The fall forum, also at Scott AFB, continued the exchange of information between AWS and AFGL. Also, a technical exchange conference at El Paso, Tex., among government meteorologists, university representatives and private research agencies met. The objective of the conference was to bring together the operational and research people of various agencies to insure that research efforts go toward solving operational problems.

AWS-Navy

The U.S. Navy and AWS formed an agreement which resulted in Navy radio weather intercept facilities in Spain, Greece and Morocco being integrated into the Global Weather Intercept program. Also, the Navy will test a new weather station at Diego Garcia, Indian Ocean. Data from this location should improve forecast and flight plan support to AF operations in or transiting the Indian Ocean, Middle East and Africa.

NWS Backup

A federal plan for cooperative backup among operational processing centers was approved by the Federal Coordinator for Meteorological Services, Washington, D.C. The plan defined tasks and procedures for AFGWC and Fleet Numerical Weather Central needed to provide backup capabilities for the NWS.

AWS, NOAA & DOD Support

AWS developed the planning requirements and related

memoranda of understanding for the National Oceanic and Atmospheric Agency (NOAA) support to DOD during a national emergency.

Command and Control Programs

Support in command and control programs continued to receive major emphasis throughout supported commands.

All 5WW WWMCCS agencies are pressing ahead to complete the necessary documents which provide for implementation of the environmental support to command and control systems. The effort is highlighted by:

*The environmental support plan to U.S. Southern Command was approved in September 1975 and the systems development notification (SDN) was signed off and sent to the Joint Chiefs of Staff in April 1976.

*A questionnaire for stating needs for environmental products (from which was developed an SDN) was sent to the Readiness Command staff.

*At Forces Command (FORSCOM) the environmental support plan was undergoing coordination with FORSCOM and AWS.

USAREUR Study Group

USAREUR convened a study group in July. Among the study's many objectives are the interoperability and enhancement requirements for USAREUR in its operational capabilities for peace, crisis and war support. The 7WS' input details all requirements and shortfalls in coordinating weather support within the North Atlantic Treaty Organization and host nations. Weather support is keyed to combat and read-zone intelligence areas.

Europe Facilities

For two years 2WW investigated putting a weather unit in air traffic control facilities in Europe. With this in mind, the best location for weather people would be at a major air traffic control center controlling flying airways, such as Frankfurt, Paris, London, etc. Investigation by 2WW into this approach determined that such an operation would be difficult to implement in Europe because AWS would have to deal with so many different national agencies. However, the difficulties are not insurmountable and could increase support capability as well as aircraft safety thus justifying expending the effort.

Improved Weather Reconnaissance (IWR)

Representatives of NOAA, USAF, AFRES, MAC, AWS and ARRS met July 28-29 to discuss the IWR required operational capability (ROC).

Results of the meeting were redefinition of the required capability, direction to revise the ROC, and an understanding that the Commerce Department would support DOD by cost-sharing the purchase of the capability.

The envisioned capability will include improved meteorological sensors, navigation system and communication capability plus limited automatic data processing and windfinding dropsonde capability (MAC ROC 4-74).

The revised IWR ROC was approved by the MAC Council on Nov. 18 then published and forwarded to USAF Dec. 7.

LACIE

The Large Area Crop Inventory Experiment (LACIE) is a joint National Aeronautics and Space Administration (NASA), NOAA, U.S. Department of Agriculture program to test the feasibility of using environmental satellite data and meteorological data to estimate worldwide crop production. In August, following visits by LACIE representatives, AWS began providing LACIE meteorological data for selected geographic areas.

DMSP Data Storage

AWS and the Environmental Data Service (EDS) recently signed an agreement for the storage of DMSP data. Under the terms of the agreement, AFGWC will provide EDS-specified customers DMSP data. EDS designated the University of Wisconsin as their archival agent for all DMSP imagery; the World Data Center,

Boulder, Colo., as the repository for ionospheric special sensor data; and the National Climatic Center, Asheville, N.C., as the archival agent for data from the vertical temperature and moisture sounder and the microwave temperature sounder. EDS will include DMSP data storage in the total NOAA archival plan and at the same time, make

all data available to the civilian and scientific communities.

Non-AF Met Equipment Maintenance

For more than 15 years AWS maintained, on request and approval by MAC, MET equipment for approximately 60 non-active duty agencies. These include the ANG and

AFRES, active duty Army, Army National Guard and Reserves, FAA, NASA and Energy Research Development Association.

AWS now has procedures to be reimbursed for materials and travel costs associated with this support.

V

VITAL STATISTICS

To serve the U.S. Army and AF, as well as customers from other organizations, as directed by higher authority, the AWS requires almost five and a half thousand people. The weather people and those persons needed to support them, are scattered throughout the world.

To better understand the size of AWS and the scope of weather's relentless task, the organization's vital statistics should first be examined.

Location (by function):	Continental United States	Overseas
Observation		
Surface	125	72
Upper air balloon		
Fixed	4	4
Mobile	5	0
Rocketsonde	0	2
Weather radar		
FPS-103	4	3
CPS-9	4	0
FPS-77	70	11
Weather service offices	117	49

Function	Cost and Personnel (by function)	
	Cost	Personnel
Observing	\$ 12,488,000	925
Analysis and forecasting	\$ 23,000,000	1,022
Communications*	\$ 1,765,000	80
Dissemination to users	\$ 23,423,000	2,044
Internal support	\$ 2,573,000	154
Maintenance	\$ 10,162,000	801
Training	\$ 15,900,000	631
Management above operating level	\$ 7,791,000	448
TOTAL**	\$102,102,000	5,474***

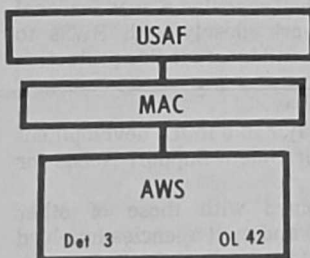
*Does not include AFCS cost.
 **Total based on projected average 1977 manning.
 ***Does not include 54 solar spaces (See Figure 1)

Publications (issued by AWS)	
Regulations, manuals and pamphlets	130
Supplements to AF regulations	32

Supplements to MAC regulations	18
Federal Met Handbook	23
TOTAL	203
Safety	
Military exposure	1,830,616 man days
Disabling injuries	37
Fatalities	4
Civilian exposure	725,954
Disabling injuries	0
Fatalities	0
USAF vehicles assigned	186
Miles driven	1,172,310
Total accidents	1
Total cost of all accidents/injuries	\$255,001

Resources Conservation
 AWS was recognized for having made the greatest Air Force savings of all MAC technical services in 1976. AWS efforts resulted in a savings of more than \$9,194,000.

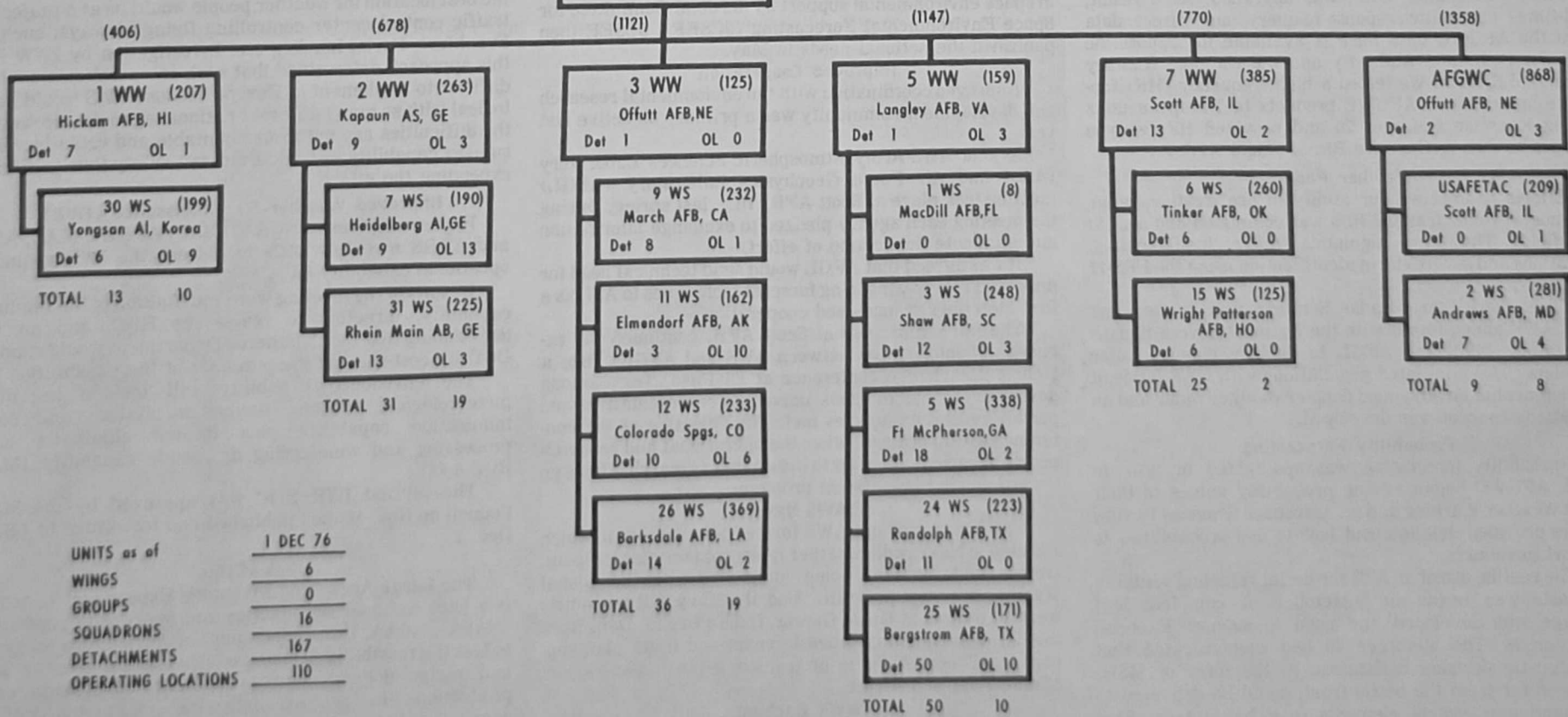
Education and Training	
Course	Graduates
Weather specialist (observer)	660



DOQ/5654

AWS ORGANIZATION

HQ AWS & DETS/OLs: 281
 HQ AWS ONLY: 201



UNITS as of	1 DEC 76
WINGS	6
GROUPS	0
SQUADRONS	16
DETACHMENTS	167
OPERATING LOCATIONS	110
TOTAL	299

Figures in() are Headquarters & Dets/OLs strengths.
 NOTE: ALL AWS authorized manpower figures are 1 FY 77. These are based on 31 JULY 76 UDL.

Rawinsonde operator	21
Weather technician (forecaster)	256
Weather staff officer	79
Tropical weather analysis and forecasting	27
Advanced met applications	19
Radar interpretation	84
Satellite interpretation	55
Weather equipment specialist	153
Specialized maintenance (miscellaneous)	72
Airman education and commissioning program	7
Basic met program	28
Masters degree	46
Doctorate degree	10

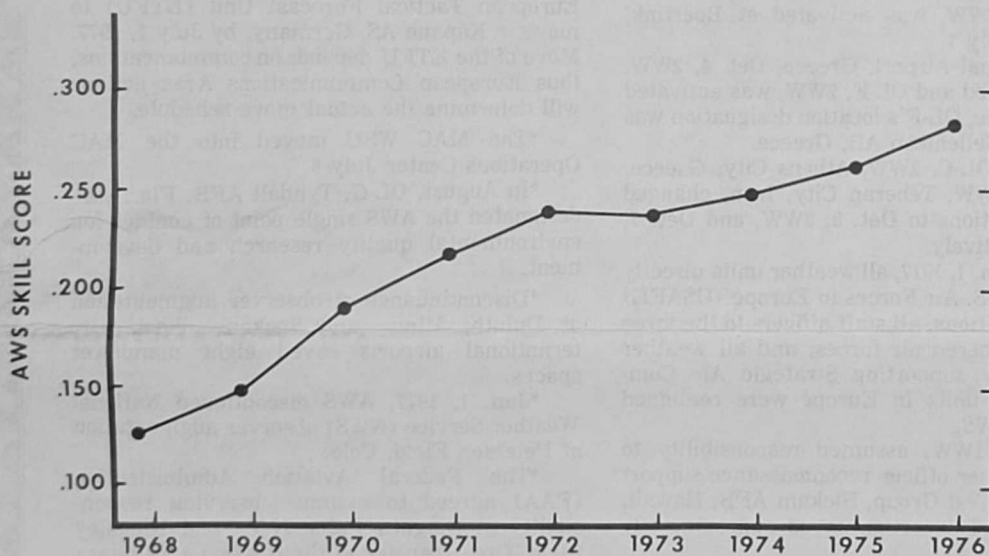
Facsimile (transmitted from AFGWC)		Terminals
USAF strategic network		66
USAF North Atlantic		3
USAF radiofax Atlantic/Caribbean		2
Europe facsimile		39
Pacific facsimile		27

		Total Force
	Units	Total Strength
ANG Squadrons	1	12
ANG Weather Flights	39	531
Mobilization Augmentees		169

Miscellaneous		Yearly Total
DD Forms 175-1 issued		834,444
Local area flights briefed		1,186,944
Out of station briefings		81,396
Met watch advisories		106,464
Point weather warning		11,724
TDY mandays used (during 21 major exercises)		7,700
Forecaster standby mandays, limited duty stations		1,352
CFPs		213,093
Weather reports collected/distributed		375,019

Communications Systems	
Teletype and Data	
COMEDS (dedicated)	273 terminals
U.S. - to - overseas	Circuits
Europe	1
Caribbean	1
Pacific	4
Alaska	2
North Atlantic	2
Intra-Theater Circuits (overseas)	
Pacific	63
Europe	52

**ALL AWS SKILL SCORES
(ALL HOURS, ALL QUARTER MONTHS)**



$$\text{AWS SKILL SCORE} = \frac{\text{STATION \% HITS} - \text{PERSISTENCE}}{100 - \text{PERSISTENCE}}$$

FIGURE 2



VI MANPOWER MANAGEMENT ACTIONS

As in all AF activities, people count for more than anything else. They determine mission success; they are vital at all locations.

PEOPLE ACTIONS—1976

*A noncommissioned officer (NCO) detco program for 19 units was established. NCO detcos now command seven AWS units, three of which are intermediate maintenance detachments (IMD).

*In June 1976, Det. 7, 7 WS, Grafenwoehr, Germany, became the first 2WW unit with an NCO detco. Two more 2WW units will convert to enlisted detcos in 1977. They are Det. 4, 7WS, Schwaebisch Hall, Germany, and Det. 11, 7WS, Coleman Barracks, Germany. U.S. Army customers express eager support for NCO detcos. Other units which gained NCO detcos in 1976 are Det. 6, 6WS (IMD), Ellsworth AFB, S.D.; Det. 29, 25WS, Buckley Field, Colo.; Det. 3, 1WW (IMD), Yokota AB, Japan; Det. 1, 6WS (IMD), Kelly AFB, Tex.; and Det. 4, 5WS, Ft. Meade, Md.

*By the end of 1976 AWS had but 354 E-5 and above observers yet to be qualified for the single career ladder. Qualification for the single career ladder is required of Specialty Code 252X1 observers for them to remain on active duty beyond April 30, 1981.

*All school quotas for Course 3AAR25170 were filled during 1976 and airmen selected to fill all fiscal year (FY) 1977 classes. Before implementation of the single career ladder, approximately 30 per cent of the course's allocated spaces were filled.

*The "A" suffix for Air Force Specialty Code 25150 was approved by the Air Force Military Personnel Center (AFMPC). The suffix identifies spaces at the E-4 grade level which require forecasting expertise. Also, Specialty Code 25150A identifies airmen who are graduates of Course 3AAR25170.

*Many NCOs with AFSC 25170 were certified to take surface observations. Full implementation of this aspect of the single career ladder has not been possible due to a shortage of airmen qualified to make and issue forecasts.

*AWS developed and implemented its station chief conversion schedule.

*Two 5WW locations were the first approved for conversion to the station chief mode of operation. Det. 18, 25WS, Mt. Home AFB, Idaho, converted in March and Det. 12, 3WS, Selfridge ANGB, Mich., in April.

*In May 1976, Det. 7, 31WS, Aviano AB, Italy, implemented the station chief program. A total of eight 2WW organizations made the change during the year and 15 units remain to be converted.

*MAC Management Engineering Team and AWS developed new BWS manpower standards.

*A schedule for converting Specialty Code 252XX to 251XX was established by AWS.

*Hq. 1WW manpower authorizations reduced from 57 to 38 because of a decrease in the number of its subordinate units and reduced Pacific activity.

*The Air Staff authorized the retention of a residual logistic function at AWS when the AFCS-AWS maintenance merger is implemented.

*Manpower of the 6WS (Mobile) reduced from 45-50 observers to 21.

*During the exercise titled AWS 400 Reduction 373 manpower authorizations were nominated to the Air Staff for reduction and resulted in AWS dropping 323 spaces.

*As a result of the Nunn Amendment (which deals with reduction of U.S. forces in Europe) and the AWS 400 Reduction, 2WW lost 43 authorizations during 1976. Of the 43 spaces, 39 were labeled as Nunn reductions.

*The 3WW identified 214 spaces as possible candidates during the AWS 400 Reduction. Approximately 56 of these authorizations were deleted. The main losses occurred in the consolidation of Luke AFB, Ariz., and McChord AFB, Wash., weather units, maintenance and Joint Use Base Agreements (JUBA) support. Additional authorizations at 3WW JUBA support units were deleted or are programmed for deletion as the NWS and FAA accept responsibility for weather observations at Luke and McChord AFBs.

VII

ORGANIZATIONAL CHANGES AND MOVES

To save needed manpower and money, better align mission responsibilities, provide specified support and for other managerial reasons, many Air Weather Service (AWS) organizational actions were taken.

*Seventh Weather Wing (WW) was activated Jan. 1, 1976, to provide proper focus to the expanding Military Airlift Command (MAC) mission.

*The weather unit at Richards-Gebaur AFB, Mo., was realigned as a direct reporting unit of the 7WW in January 1976, as was the Andrews AFB, Md., base weather station (BWS).

*Detachment (Det.) 7, 12th Weather Squadron (WS), Holloman AFB, N.M., was established.

*Direct reporting units (DRUs) at Torrejon AB, Spain; RAF Mildenhall, United Kingdom; and Ramstein AB, Germany; were transferred within 2WW to the 31WS.

*Sept. 1, the 20WS was inactivated at Yokota AB, Japan, and the 30WS activated at Yongsan, Korea.

*The 16WS was inactivated Oct. 1 as part of a manpower reduction package titled "AWS '400' reduction exercise." All 16WS units were realigned to 5WS.

*Semi-automatic ground environment (SAGE) and BWS units were consolidated at McChord AFB, Wash., Dec. 1, with the inactivation of Det. 4, 12WS, and the deletion of the unit's detachment commander (detco) position. The consolidated unit (Det. 11, 7WW) will maintain separate work centers until closed circuit television (CCTV) is installed. The consolidation will save more than \$128,000 per year.

*All solar operating locations (OL) were upgraded to detachments July 1.

*The Kansas City Air Route Traffic Control Center (ARTCC) weather unit was activated May 28.

*Direct weather support to U.S. Army research, development, testing and evaluation (RDT&E) at Dugway Proving Grounds, Utah, ended July 1. Remote support is now provided by Hill AFB, Utah.

*Inactivation of Det. 30, 1WW, U-Tapao RTNB, Thailand, on June 7 completed the drawdown of Southeast Asia (SEA) weather units. Specialized weather support to SEA ended after 14 years.

*The Pentagon unit, Det. 1, Air Force Global Weather Central (AFGWC), was activated to provide a single manager for support to the National Command Authority.

*Observing responsibility at Martin County Airport, Md., transferred to the airport manager Aug. 1. The "observing only" OL was inactivated.

*Det. 17, 20WS, Yokota AB, Japan, reorganized and terminated operation of the Asian Tactical Forecast Unit (ATFU). Weather support units (WSU) were established at Headquarters (Hq.) 5th Air Force (AF) and 314th Air Division (ADiv).

*The Technical Plans and Programs Division was formed to manage the unified long-range technical planning for Hq. AWS.

*The F.E. Warren AFB, Wyo., detachment was inactivated and a staff weather officer (SWO) cell was established Oct. 1.

*Det. 12, 3WS, Selfridge ANGB, Mich., was reorganized with a new concept of operations. It is manned by all civilians except for the detco.

*As of July 1, MacDill AFB, Fla.'s BWS was no longer consolidated with 1WS.

*The AWS technical library and USAF Environmental Technical Applications Center (ETAC) library were combined in March and in November became part of the USAF technical library system.

*At Andrews AFB, Md., the 2WS command, administrative and operations sections were relocated to Building 1522A, across the street from the rear of Headquarters Air Force System Command (AFSC). The unit's requirements section remained split into two work centers located in Hq. AFSC and nearby Building 1535.

*Det. 11, 7WW, assumed maintenance responsibility for Ft. Lewis, Wash., (Det. 6, 5WW) weather equipment as did Det. 21, 7WW, for Ft. Bragg, N.C., (Det. 3, 5WW) weather equipment.

*OL-A, Det. 20, 31WS, was inactivated at Wiesbaden AB, Germany, Feb. 1.

*OL-B, 2WW, was activated at Boerfink, Germany, July 1.

*At Athenai Airport, Greece, Det. 4, 2WW, was inactivated and OL-F, 2WW, was activated May 1. In June, OL-F's location designation was changed to Hellenikon AB, Greece.

*July 1, OL-C, 2WW, Athens City, Greece, and OL-D, 2WW, Teheran City, Iran, changed their designations to Det. 3, 2WW, and Det. 7, 2WW, respectively.

*As of Jan. 1, 1977, all weather units directly supporting U.S. Air Forces in Europe (USAFE) tactical operations, all staff officers to the three USAFE numbered air forces, and all weather units directly supporting Strategic Air Command (SAC) units in Europe were realigned under the 31WS.

*Det. 4, 1WW, assumed responsibility to provide weather officer reconnaissance support to the 6594th Test Group, Hickam AFB, Hawaii, in May 1976. This action saved approximately \$13,000.

*As a result of an Air Force Audit recommendation, 2WW consolidated the meteorological (MET) equipment maintenance functions at Det. 3, 31WS, RAF Lakenheath, UK, with Det. 20, 2WW, RAF Mildenhall, UK,

May 1. The maintenance activity now serves both units, including maintaining equipment at the outlying RAF Holbeach Test Range.

*A special eight-week centralized maintenance test was conducted by 2WW at Katterback Army Airfield (AAF), Germany, between Oct. 14 and Dec. 8. The test evaluated the feasibility of centralized maintenance support for MET equipment at U.S. Army installations in Europe.

Based on test results, 2WW now plans to establish centralized maintenance facilities at Rhein Main AB; Heidelberg; and Katterbach AAF, Germany, to support 34 U.S. Army installations in Europe. The establishment should take place when the consolidation of maintenance functions occurs between AWS and the Air Force Communications Service (AFCS).

*Under USAFE Programming Plan 4780-75 (CREEK PULL) the 2WW programmed the European Tactical Forecast Unit (ETFU) to move to Kapaun AS, Germany, by July 1, 1977. Move of the ETFU depends on communications, thus European Communications Area actions will determine the actual move schedule.

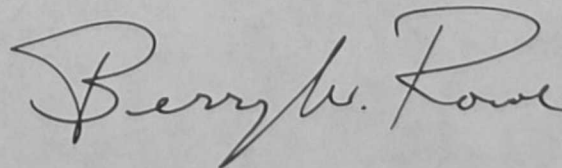
*The MAC WSU moved into the MAC Operations Center July 6.

*In August, OL-G, Tyndall AFB, Fla., was designated the AWS single point of contact for environmental quality research and development.

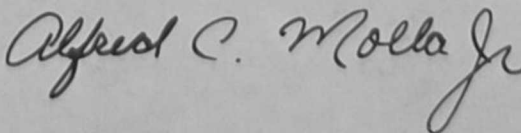
*Discontinuance of observer augmentation at Duluth, Minn., and Spokane, Wash., international airports saved eight manpower spaces.

*Jan. 1, 1977, AWS discontinued National Weather Service (NWS) observer augmentation at Peterson Field, Colo.

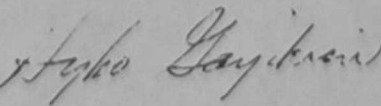
*The Federal Aviation Administration (FAA) agreed to assume observing responsibility at Niagara Falls, N.Y., and Kingsley Field, Ore. Transfer of the mission at Niagara Falls is scheduled for July 1, 1977. AWS is still negotiating the Kingsley Field transfer in an attempt to reach a satisfactory arrangement related to equipment. The FAA proposed the Air Force provide funds for new equipment.



Brig. Gen. Berry W. Rowe AWS commander



Col. Alfred C. Molla Jr. AWS vice commander



Col. Hyko Gayikian AWS chief of staff