

PRESIDENT'S MESSAGE

By Les Lemon

It is my great pleasure to announce the winner of the **FIRST NWA College Scholarship**. Thanks to the generosity of the late Arthur C. Pike, a \$1,000 college scholarship is now available annually to a college student in their junior year or beyond. In this first year of the scholarship program we received twelve applications from students enrolled in meteorology programs at the California University of Pennsylvania, Lyndon State College, Mississippi State University, North Carolina State University, Saint Cloud State University, the University of Maryland, the University of Oklahoma and Valparaiso University.

The Arthur C. Pike NWA Scholarship in Meteorology for the year 2001 is awarded to Nettie R. Lake of Stafford Springs, Connecticut.

She attends Lyndon State College in Lyndonville, Vermont, where she is on the Dean's List with Distinction. She expects to graduate in May 2002 and go on to graduate work and a career in teaching and research. Congratulations to Ms. Lake and best wishes to her and all other applicants in their studies and career planning.

Thanks to the NWA Education Committee members for reviewing all scholarship applications and for recommending their selection to the NWA Council for approval. Applications for the 2002 scholarship are due in to the NWA office by 15 March 2002.

More GOOD NEWS! The outreach training initiative of the NWA Aviation Meteorology Committee has been extremely successful. The interactive Internet course on *Thunderstorms and Flying* developed and placed on the NWA Web site in late March was to finish at the end of May, but due to its popularity, it was extended through June. The course material will remain on the NWA Web site as a tutorial thereafter. Tim Miner, the course director, briefed me that as of mid-June, 2200 students had enrolled from 18 countries on six continents, and registrations continue even now at about six per day. Students included many commercial, general aviation and military pilots, air traffic controllers and aviation meteorologists (military and civilian). Several university aviation programs used the site for instruction. The course was also endorsed by many general aviation flight instructors for their students.

Based on the tripling of hits to our Web site, no doubt many other individuals and hopefully many NWA members glanced at the course material, but didn't register. Tim also forwarded the first two course evaluations received. The first came from an Air Force Wing Flying Safety Officer from McGuire AFB, NJ. He wrote: "**GREAT COURSE!!!**" The second came from a Captain for US Airways. "*I find that this course has enabled me to make better assessments enroute, and better determinations of what I see on the charts and the Internet weather sites. I am able to better inform ATC of my reasons for a reroute or deviations. I now have better terminology when issuing a Weather Report to the company via ARINC, when flying the Atlantic routes and the Caribbean. Conclusion: I hope that this site stays up for a long, long time to enable me and others to review it and see further changes, and please include us in new discoveries and agendas pertaining to weather.*"

Thanks again to Tim Miner, the course director; Tim Oram, the course webmaster; Terry Lankford, co-chair of the Aviation Meteorology Committee; Carolyn Kloth, co-chair of the Committee and the many others who assisted.

To all members and other readers — please take the time to look at the *Thunderstorms and Flying* course material. You will be amazed and proud of what a small number of our members have done voluntarily. It may also give you ideas on what other projects we might take on to increase the knowledge of weather and its impacts to users of weather information products. This is just one of the ways we can support and promote excellence in operational meteorology and related activities. You can also help advertise our initiatives to others and recommend they join the NWA to participate in its many activities and increase the opportunities for us to do more.

One great opportunity we have is to recognize excellence in our members and others with Annual Awards. If you haven't nominated someone yet, call the NWA office and say it is on the way — a few days late.

>> IMPORTANT DATES <<

30 June 2001..... NWA Annual Award nominations due
(see Feb. Newsletter)

1 August 2001.....Sol Hirsch NWA Education Fund Grant
applications due (see Feb. Newsletter)

13-19 Oct 2001...NWA 26th Annual Meeting in Spokane (pg 7)

MEMBER NEWS

WELCOME to a new NWA Corporate Member!

GLOBAL IMAGING

201 Lomas Santa Fe Drive, Suite 380
Solana Beach, California 92075
Tel: 858-481-5750; FAX: 858-481-5794
Internet: www.globalimaging.com

Point of contact: Michael Guberek
e-mail: mguberek@globalimaging.com

Visit their Web site for more information on their many products and services.

Michael W. Heathfield, a Major in the US Air Force Reserve, and the Warning Coordination Meteorologist at the NWS Forecast Office in Grand Rapids, Michigan, was selected for the Air Force Spengler Award as the Outstanding Air Force Weather Individual Mobilization Augmentee for the year 2000. He performs his reserve duty at the 2nd Weather Flight, Fort McPherson, Georgia. The Spengler Award was established in 1975 in honor of Brigadier General Kenneth C. Spengler (US Air Force Reserve) who served as the Special Assistant to the Commander, Air Weather Service from 1961-1975 and is currently the secretary-treasurer of the AMS.

William P. Roeder of the US Air Force's 45th Weather Squadron at Patrick Air Force Base, Florida was selected for the annual Zimmerman Award for the Best Application of Climatology in support of Aerospace Weather for the year 2000. His outstanding leadership in operational research, both at universities and in-house, improved weather support to America's space program. His work also included direct climatological support for space launch operations. This is Bill Roeder's 2nd Zimmerman Award.

Alan Sealls, NWA Broadcast Seal Committee Chair and NWA member since 1986, received Best Weather Anchor award for the year 2000 from the Mobile, Alabama, Press Club. He also produced a special program on FEMA's Project Impact that won a community service award for station WKRG-TV where Alan is Chief Meteorologist.

NWA Newsletter (ISSN 0271-1044)

Editors: Frank Brody, Larry Burch and Eli Jacks

Publisher: Kevin Lavin, Executive Director

Published monthly by the National Weather Association (NWA)

6704 Wolke Court, Montgomery, Alabama 36116-2134 USA.

Tel/FAX: (334) 213-0388; e-mail: NatWeaAsoc@aol.com

Web site: www.nwas.org

Submit newsletter items directly to: Editor NWA Newsletter, Frank Brody at NewsletterNWA@aol.com; Eli Jacks at Elliott.Jacks@noaa.gov; Larry Burch at Larry.Burch@noaa.gov or to the NWA office. Material received by the 5th will be considered for that month's issue.

Members receive the monthly NWA Newsletter and quarterly *National Weather Digest* as part of their regular, student or corporate membership privileges. Contact the NWA office or view the Web site for membership information. Newsletter subscriptions are available at \$18.00 per year plus extra shipping costs outside USA. Single copies are \$1.50. Contact the NWA office with address changes.

◀ IN MEMORIAM ▶

Donald W. Pittman (1944-2001), was born on 1 February 1944 in Evansville, Indiana and died of a massive heart attack while on a business trip in Oklahoma City on 15 May 2001. US Air Force Colonel (retired) Donald W. Pittman was buried at Arlington National Cemetery in Arlington, Virginia on 5 June 2001.

Don was a candidate for National Weather Association vice president this year and his biography noted that, he received a B.S. in Meteorology from Saint Louis University in 1968 and a M.S. in Meteorology from Texas A & M University in 1976. He was also a graduate of the U.S. Air Force Program Management School, Test and Evaluation School and Department of Defense Contract Management School. He began his meteorology career in the U.S. Air Force (Air Weather Service) and served as: Wing Weather Officer, Wurtsmith AFB, Michigan, 1968-70; Aerial Reconnaissance Weather Officer, Ramey AFB, Puerto Rico, 1970-73 and Keesler AFB, Mississippi, 1973-75; Sensor Programs and Testing Officer and Chief, Sensor Applications Division, Headquarters, AWS, Scott AFB, Illinois, 1976-79; Plans and Programs Officer, Headquarters, Military Airlift Command, Scott AFB, Illinois, 1979-81; Weather Program Element Monitor, Pentagon, Washington, D.C., 1981-84; Director of Operations and Commander, 28th Weather Squadron, Royal Air Force Mildenhall, United Kingdom, 1984-87; Chief, Programs Acquisition Branch and Chief, Computer Systems Division, Air Force Global Weather Central, Offutt AFB, Nebraska, 1987-90; Director of Operations and Vice Commander, 1st Weather Wing and Deputy Director and Director of Weather, Pacific Air Forces, Hickam, AFB, Hawaii, 1990-94. Military Awards include Legion of Merit, Meritorious Service Medal, Air Medal, and Air Force Commendation Medal. He retired from the Air Force as a Colonel, moved to Annapolis, Maryland and became Project Manager for The Aerospace Corporation's support to the National Weather Service's Advanced Weather Interactive Processing System (AWIPS), 1995-99. He was currently managing Aerospace Corporation support to the National Weather Service's Program Management Office, the Systems Engineering Center, and the Radar Operations Center. Support focused on systems requirements, software development processes, systems acquisition, and independent system assessments. He also served as the on-site Aerospace representative to NASA Goddard for Aerospace support to the NPOESS Preparatory Project. He was a member of the NWA, AMS, Air Weather Association and Air Weather Reconnaissance Association.

Don is survived by his wife, Ginny Pittman of Annapolis, Maryland, two sons, Jeff and Bryan, one stepson, Doug, and two granddaughters. Don and Ginny were married for almost 25 years and met while Don was at Texas A&M University. Ginny is from College Station, Texas.

Our thoughts and prayers go out to Ginny and family. They also lost Ginny's Mother to cancer one day after Don was buried at Arlington National Cemetery.

- Exec. Dir.

NWA BROADCAST METEOROLOGY COMMITTEE

It's a freelance free-for-all in the world of Broadcast Meteorology! Elements have come together in the television industry to create a relatively new breed of on-air meteorologist, the freelancer. The idea of freelance employees has been around for years, but you would normally expect your news anchor team to be a group of salaried individuals who might be around for a long time as the TV station builds or maintains its market presence. Well, in many cities, that is not the case anymore, and it is something that adds to the concerns of the NWA Broadcast Meteorology Committee.

What has happened? Weather forecasting intrigues more people than ever before. There are more students majoring in meteorology, more television professionals getting correspondence degrees, and there is even a heightened interest in the general public as they witness weather disasters on videotape from around the world. However, all of this interest has led to a flood of meteorologists who wish to pursue a career in broadcasting. That's great, except that now, after years of expansion, the job market is shrinking. Many television stations, in order to cut costs as advertising revenues decrease, have not filled positions that have been vacated. The young, hungry weathercaster still wants a job, and most news directors still have to provide weather in all their daily newscasts...but how does a station do that without having to provide decent salaries, perks and benefits? Freelancers!

The freelance weather anchor works on a per-diem basis, getting some experience to build a resume, while the television station saves money. A win-win situation? Not really. Freelance employees have no commitment to the TV station, and can leave at any time when a full-time position opens up elsewhere. They can't be forced to work less preferable shifts or holidays since they are, in essence, independent contractors, and can choose how much work they want depending on their financial situation. On the other side of that argument, the news director can release these employees at any time, for just about any reason. Finally, the viewers suffer because the freelancer is not obligated to give talks to schools or community groups, or to participate in promotional events. And, if the talent changes every six to 12 months, the folks at home can't build the personal relationship with their news team that makes the newscast comfortable to watch.

How does this affect the NWA and the Broadcast Meteorology Committee? We do not have provisions in our procedures for awarding Weathercaster Seals of Approval to freelancers. So, how and when do they qualify for NWA Seals, since they are not technically full or part-time employees? This is something the NWA Broadcast Meteorology Committee will be actively reviewing over the next few months. Until then, if you are interested in being on the committee, we need a Public Relations Chair, and a non-broadcasting member of the NWA to provide input to the committee. If interested, please e-mail me at: skye@fuse.net.

Hope to see many broadcasters at the NWA Annual Meeting broadcaster workshops, TAPE SWAP and other continuing education/training activities in Spokane, WA in October 2001!

- Rich Apuzzo, *Broadcast Meteorology Committee Chair*

May and June were busy months for the many personnel who accomplish the operational implementation of models and model changes at NCEP's Environmental Modeling Center and Central Operations and other agencies. The month of May began with preparations for the implementation on 15 May 2001 of a set of changes to the NCEP **Medium Range Forecast (MRF)** model. The affected forecast suites were the Aviation, the MRF, and the global ensembles. Three major changes were put into operations. First, prognostic cloud water/ice process parameterization to model the condensation and precipitation processes was added to replace the previous use of relative humidity to estimate cloud amount. Secondly, a cumulus momentum mixing algorithm was added to the cumulus parameterization scheme. The addition of this algorithm has been found to reduce the occurrence of false alarm storms in the tropics. Finally, the cumulus cloud parameterization scheme was modified to simulate the effect of an ensemble of clouds by selecting cloud tops at random from a range of possible heights at each time step. The Technical Procedures Bulletin is at Web site: sgi62.wwb.noaa.gov:8080/tpb97/CLW/html/clw.html.

May 29th saw the operational introduction of the coupled Ocean-Atmosphere version of the Geophysical Fluid Dynamics Laboratory (GFDL) **Hurricane model**. This version, the result of several years of joint research at GFDL and the University of Rhode Island, allows the sea surface temperature to evolve throughout the forecast integration. Experimental results have indicated that the ocean coupling will have a positive influence on the skill of intensity forecasts. More information about this model and the testing results leading to its implementation can be found at: www.emc.ncep.noaa.gov/nestedhurr/index.html

Since 5 June, the **short-range ensemble** has been running in real-time and under production constraints to allow for real-time testing and evaluation. The regional ensemble consists of a set of 10 members (5 Eta, 5 Regional Spectral Model) run twice daily with 48 km horizontal resolution, covering the Eta domain. To enable product availability about the same time as the operational Eta from 0000Z and 1200Z, the ensemble runs will start at 2100Z and 0900Z and run through 63 hours. Output will be available at 3-hour intervals. More information can be found at Web site: lnx48.wwb.noaa.gov/SREF/SREF.html

Last but not least on this ambitious list of model changes is the spring change package for the **Eta model** scheduled at this writing for 26 June 2001. This package consists of three major changes. The first change includes a more general balance constraint in the 3DVAR analysis procedure and some retuning for both warm and cold seasons. The second change introduces the assimilation of observed precipitation into the Eta Data Assimilation System. The observed values come from the Stage IV hourly precipitation analyses (simple box average) for the CONUS derived from 2500 automatic reporting gages and hourly precipitation estimates from the WSR-88D radars. The changes are designed to correct the precipitation bias during data assimilation, improve soil moisture field and the model's short-term precipitation forecast. The third change is a set of upgrades to the land-surface physics package. These deal with improvements to cold season processes, bare soil evaporation, soil heat flux and surface characterization and vegetation. The draft Technical Procedures Bulletin is at Web site: www.emc.ncep.noaa.gov/mmb/mmbp11/spring2001/tpb/

Correction to May, 2001 NCEP Notes

The article in last month's NCEP Notes about NCEP's backup procedures neglected to mention the contributions and support of the Office of the Federal Coordinator for Meteorology (OFCM) sponsored Committee for Operational Processing Centers and its Working Group for Cooperative Support and Backup. NCEP is a member of both, along with the Air Force Weather Agency, the Navy's Fleet Numerical Meteorology and Oceanography Center, the Naval Oceanographic Office, and NESDIS's Office of Satellite Data Processing and Distribution. The longstanding relationship among these agencies facilitated by these OFCM-sponsored committees/groups was instrumental in allowing a quick and effective backup to be assembled during NCEP's emergency.

- Lauren Morone, NWS/NCEP

GOES NEWS

GOES-M is scheduled to be launched on 15 July from Cape Canaveral Air Force Station in Florida. The GOES-M is the first of the NOAA satellites equipped with the new solar storm detection instrument. "The Solar X-ray Imager will provide the kind of improvements in space weather forecasting that satellite imagery did for tracking hurricanes," said Steven Hill, SXI Program Manager at NOAA's Space Environment Center in Boulder, Colo. "The Solar X-ray Imager will enable us to better protect billions of dollars worth of commercial and government assets in space and on the ground." The instrument will take a full-disk image of the sun's atmosphere once every minute. The images will be used by NOAA and the U.S. Air Force Weather Agency to monitor and forecast the sources of space weather disturbances from the sun, enabling forecasters to predict disturbances to Earth's space environment that can fry satellite electronics, disrupt long-distance radio communications or surge power grids. The ability to monitor and forecast solar disturbances is valuable to operators and users of military and civilian radio and satellite communications systems, navigation systems and power networks, as well as to astronauts, high-altitude aviators and scientists.

NASA has selected three firms for formulation of the next generation GOES instrument. NASA has awarded three \$8 million contracts to Ball Aerospace and Technologies, Boulder, Co., ITT Industries, Fort Wayne, Ind., and Raytheon Santa Barbara Remote Sensing, Goleta, Calif., for formulation phase work on an advanced imager for the next generation of geostationary weather satellites operated by NOAA. The new advanced sensor, called the Advanced Baseline Imager (ABI), will be the primary instrument on NOAA's future Geostationary Operational Environmental Satellites (GOES) beginning with the GOES-R mission which will be ready to fly in 2008. The ABI will provide the core data that the National Weather Service uses for routine weather forecasting and severe storm forecasting. Under terms of the firm fixed-price contracts, each company will develop detailed engineering plans for the future instrument. NASA is expected to select a company in 2003

to build the instrument. The ABI is an advanced version of the current series of GOES Imagers but will have a greater number of channels, improved spatial resolution and faster Earth coverage to provide more accurate data for improved forecasts of severe weather, tornadoes, hurricanes and other weather. GOES satellite requirements and funding are provided by NOAA, which distributes weather data for the United States and environs. NASA's Goddard Space Flight Center, Greenbelt, Md., procures and manages the development of the GOES spacecraft for NOAA. For more information on the GOES satellites, go to Web site: www.osd.noaa.gov/sats/goes.htm Weather imagery and atmospheric sounding information can be found at Web site: rsd.gsfc.nasa.gov/goes/ - NASA and NESDIS Public Affairs

LOCAL CHAPTER NEWS

The southern New England NWA Chapter held its second meeting of 2001 on 15 May at Bella Costa restaurant in Framingham, MA. The theme of the meeting was warm season convection. Walt Drag, Senior Forecaster at the NWS office in Taunton, MA gave a presentation on the application of Stability Indices and model soundings. Walt's research and forecast experience has shown success in predicting the timing of significant convective events, through utilizing well-defined sharp rises in the Total Totals and K-index values. Two convective cases were demonstrated, a severe event (7/18/00) and another, approaching severe (4/24/01). When Total Totals values approach the lower to mid 50s along with K-index spikes of 4 to 6 degrees (C), with values in the mid to upper 30s, expect a severe weather event to occur within 45 minutes either side of the greatest instability. This is assuming sufficient synoptic scale forcing is present. In addition, Walt noted that he has found that CAPE (convective available potential energy) and the K-index values tend to spike simultaneously. The Eta model hourly soundings are of greater value than the Eta plan view time section of 3 to 6 hour fields as seen in AWIPS and BUFKIT. Detailed hourly trends depict pronounced changes in the stability of the column. Those changes can be masked in the plan view time section fields. Walt emphasized these techniques will provide value on the timing of a potentially significant convective event, but not necessarily the magnitude or areal extent.

Frank Nocera, Chapter President, gave a presentation on the 6/2/00 severe weather episode that impacted a large portion of southern New England. Large hail and damaging straight-line winds were observed from the Berkshire Mountains eastward into the densely populated Boston-Providence corridor. In addition, an F1 tornado was confirmed in Northampton, MA. Frank gave an overview of the synoptic scale flow prior to the event, model performance and a review of radar signatures from the NWS WSR-88D at Taunton, MA. At 1200Z 2 June 2000, a mid-level trough with a jet max of 55 knots was located over western Ontario, and its associated surface low of 1008 mb centered just north of Lake Huron. In addition, a warm front was draped across western NY, northeast PA and then extending east through the lower Hudson Valley of NY and coastal southern New

England. South of this front a very moist airmass was in place with surface dewpoints between 70 and 75 degrees. Twelve hours later at 0000Z 3 June, the mid-level jet increased to 70 knots and had traversed east into the St. Lawrence River Valley. Meanwhile, the accompanying surface low intensified as the surface pressure dropped to 1004 mb, and the warm front moved north through New England. This resulted in an increasing low-level moisture convergence field, which provided low-level forcing in concert with synoptic-scale forcing associated with an amplifying mid-level trough. The result was a deep column of lift of a moist and unstable airmass. What was unique about this event was the eastern extent of the severe weather. Large hail and damaging straight-line winds occurred as far east as the Greater Boston area and western sections of Cape Cod. The primary factor for this eastward extent was the west to east movement of the upper trough and surface low through the St. Lawrence River Valley. This resulted in a west to southwest surface flow over New England, which limited the amount of cool and stable maritime air advecting northeast over the coastal plain. - Frank Nocera, President

MEETING NEWS

- **International Conference on Disaster Management** will be held 6-10 August 2001 at the Rosen Centre Hotel in Orlando, Florida. For more information call: (850) 906-9221 or visit Web site: www.DisasterMeeting.com
- **NWA 26th Annual Meeting, 13-19 October 2001 in Spokane, Washington.** Please see page 7.
- **The Fifth Annual High Plains Conference** sponsored by the High Plains AMS and NWA Local Chapters will be held **3-5 October 2001** in North Platte, Nebraska. A preliminary program, and registration, hotel and general information will be at Web site: www.crh.noaa.gov/lbf/hpams/5HPC.htm. This year's theme focuses on "The Challenges of Weather Forecasting on the High Plains". Any topic is applicable, including winter and severe weather forecasting, and both research and operational aspects of forecasting High Plains weather are welcome. Sessions will begin with an invited speaker and the remaining speakers will be given 20 minutes including questions. The tone of this conference is less formal than at national conferences, and part of the purpose for this conference is to provide a forum and/or training platform for first time presenters, and for work that has not yet had a chance to go through the academic peer review process. Titles and one-page abstracts should include each author's name and affiliation, the corresponding author's complete address, telephone/fax number, and e-mail address. **Abstracts must be submitted no later than 27 July 2001 to: Fifth High Plains Conference Committee**, National Weather Service, 5250 E. Lee Bird Drive, North Platte, NE 69101; e-mail: john.stoppkotte@noaa.gov; Tel: (308) 532-0921; Fax: (308) 532-9557. In addition, this year the High Plains Chapters will hold a **Student Paper Competition** for the best student paper describing research on a topic related to Plains weather. For further information, see the Web site noted above or contact the Conference Committee.

- **Special Conference on Weather Analysis and Forecasting Issues in the Central United States** will be held at the University of Missouri-Columbia, Columbia, MO, **30 Nov. - 2 Dec. 2001** to address all topics relating to operational meteorology in the Midwest (emphasis on heavy precipitation forecasting, winter weather phenomena, and interannual variations in Midwestern climate); oral presentations are encouraged, although space will be allotted for poster exhibitions. Registration information is at Web site: solberg.snr.missouri.edu/WAFICUS/. **Abstracts are due by 31 July 2001 to: Sharon Burnham**, University of Missouri-Columbia, Department of Soil and Atmospheric Sciences, 116 Gentry Hall, Columbia, MO 65211 (with abstract, please provide contact information and specify oral or poster presentation). Conference organizers are: Drs. Anthony R. Lupo and Patrick S. Market, Assistant Professors of Atmospheric Science at University of Missouri-Columbia.

- **Interactive Symposium on the Advanced Weather Interactive Processing System (AWIPS), 13-18 January 2002.** As part of the 82nd AMS Annual Meeting, in Orlando, Florida, the AMS Board for Operational Government Meteorologists, AMS Committee on Interactive Information and Processing Systems, the AMS Committee on Weather Analysis and Forecasting, the National Weather Association and the National Weather Service are cosponsoring an AWIPS interactive symposium. The theme of the 2002 symposium is "Leveraging AWIPS to Maximize Our Nation's Forecast and Warning Support". The primary purposes of this symposium are three-fold: to provide a forum for the exchange of status, plans, and concepts for AWIPS in operational use; to increase communication and collaboration among operational users of AWIPS and the hydrometeorological community; and an opportunity to demonstrate AWIPS capabilities. Presentations and papers are solicited in the following areas: Overview of AWIPS; Visualization; Data Handling; Local Modeling; Internet/Web Opportunities and Challenges; Operational Meteorological and Hydrological Applications; Specialized Uses; Interactive Forecast Preparation System; Locally Written Applications, and Education and Training. **The deadline for abstracts is 6 July 2001.** Submit abstracts electronically via Web site (<http://www.ametsoc.org/AMS>). AMS will provide instructions to authors of accepted papers. Camera-ready manuscripts (page length to be determined), including photos and diagrams, must be submitted by **1 OCTOBER 2001** to AMS Headquarters. Page charges will be assessed to defray printing costs. Registrants will receive a preprint volume at the conference. For further information or to provide suggestions to enhance the symposium, please contact: Major Ken Carey, Air Force Studies and Analyses Agency, tel: 703-588-8626; e-mail: kenneth.carey@pentagon.af.mil or contact the NWA office.

Final invoice notices were sent to members who have not as yet paid dues for 2001. The NWA database will be purged at the end of July of members who have not renewed by then.

JOB CORNER

(Ed: The NWA lists job openings free from equal opportunity employers for the benefit of members. See the Job section on the NWA Web site: www.nwas.org for more complete details on the following jobs, short notice listings and job links.)

e-ACUMEN: Meteorologist / Weather Risk Analyst / Statistical Climatologist

There is a growing awareness of the high importance of improved weather and climate information to energy companies. e-Acumen is a software and consulting firm that provides physical risk management products to electricity and gas marketers. We currently serve many of the top-50 power marketers in the United States. The weather derivatives / weather risk business unit of e-Acumen is looking for a meteorologist or climatologist with an interest in applying his/her expertise to helping energy firms more effectively manage their exposure to weather. Experience in commercial forecasting services would be an advantage but is not a necessity. Interest in business and a dedication to showing economic value-added of improved weather and climate information is crucial. Our principal products/services include: Weather risk consulting, weather derivative pricing and risk management (software and consulting), weather forecasts from one day to seasonal time scales, analysis of forecast accuracy and determination of forecast model biases, simulation of the relationships between energy commodities and weather for trading and risk management. Our ideal candidate has an MS in atmospheric science or meteorology as well as knowledge or experience in trading. Understanding of basic financial contracts would be helpful (options, futures, etc.). Our clients use a wide range of financial contracts to manage their risk and to improve profitability, so the candidate should have an interest and a high level of motivation to learn financial instruments in energy markets. While research is a part of this position, the candidate will also be involved in presenting to clients and potential clients and must be able to motivate the importance of weather risk management in a financial context. The field of weather risk management is growing fast and this position allows the successful candidate to be involved at the cutting edge. The position will be in our Broomfield, Colorado offices close to Boulder and Denver. To learn more about e-Acumen, please visit web site: www.e-acumen.com. Please send resume or questions to: geoff.considine@e-acumen.com

AWIS WEATHER SERVICES, Inc. has an immediate opening for an Operational Meteorologist. We specialize in forecasting for agriculture, energy, media, and sports clients. AWIS also maintains an extensive database of national and international data that serves a wide variety of clients. AWIS seeks meteorologists who can apply their meteorological expertise to the quality control and verification of near real-time data worldwide. Duties also include preparing specialized forecasts for the media, sporting events, and other clients. During the winter, the meteorologist assists in the preparation and presentation of detailed freeze forecasts and directly advises clients of potential risks. The ability to work with a team and awareness of time constraints is essential. B.S. degree in meteorology or related area required. Competence with UNIX is essential. The ability to program in C, C++, or FORTRAN is a plus. Requires working one day each weekend and some holiday work. No night work is involved. AWIS operates with the latest

technology including a NOAAPort system and a mixture of Sun Solaris and Linux computer systems. Benefits include an excellent health plan, IRA (SIMPLE) retirement plan, paid time off, and a liberal leave policy. Auburn is a college town, providing ample opportunities for entertainment. Meteorologists wishing to be considered for this position should mail their resume to: AWIS Weather Services, Inc., Attn: Human Resources, P.O. Box 3267, Auburn, AL 36831-3267; or by e-mail to: rgetz@awis.com

PACIFIC GAS AND ELECTRIC COMPANY seeks a meteorologist for their Technical and Ecological Services Department in San Francisco. Responsibilities include:

a. Weather Forecasting: Primary job responsibility is weather forecasting. Strong teamwork with other professional forecasters will be essential for success. The candidate will be trained and become responsible for preparation, quality, and on-time dissemination of detailed weather forecasts to numerous clients, including severe weather notifications, and support of emergency drills at Diablo Canyon Power Plant. Rotational shift schedule. Will include face-to-face verbal weather briefings and office tours for a wide range of audiences.

b. Cloud Seeding: Position monitors weather for company cloud seeding operations in the Mokelumne and Lake Almanor watersheds. Evaluates and forecasts watershed conditions, and orders optimal, sectorized cloud seeding when appropriate.

c. Applied Climatology: Expertise in climate databases and statistical analysis techniques is required. Prepares climate and/or statistical summaries for specific sites or areas as part of environmental impact reports, reports to the California Public Utilities Commission, and forensic investigations. Manages meteorological data files, and prepares specialized reports.

d. Science and Applications Research: Initiates, designs, and performs authorized independent research activities. These projects will make improvements in meteorological measurements, weather forecasting techniques, long-range weather forecast capabilities, weather information dissemination to internal clients, and more cost-effective operation of the Weather Office.

Requirements: Experience with Field Meteorology (instruments, loggers, measurements, towers, weather forecasting, and weather office operations) and meteorological analysis and research. BA or BS in Meteorology, Atmospheric Sciences, or related field; MA or MS in Meteorology, Atmospheric Sciences, or related field desired. Strong writing and computer skills are required. Analyses, work organization, and planning skills are required for both short- and long-term weather technology needs for the company.

Please send your resume and cover letter to: PG&E Employment/IMON-6903, Mail Code N3Y, P.O. Box 770000, San Francisco, CA 94177. E-mail: employment@pge.com and jpka@pge.com (Please paste resume and cover letter into body of e-mail; no attachments.) We electronically scan all resumes. In order to facilitate the review of your resume, please use 12 point type, and avoid bold, underline, italic, small typefaces, and folding or stapling your resume. Learn more about us by browsing our Web site at www.pge.com.

Please refer to the last Newsletter and the NWA Web site at www.nwas.org for many other jobs announced earlier that we did not have room for in this issue.

The original page 7 was the 26th NWA Annual Meeting preregistration form and deleted from this archive issue. The original page 8 follows. *-Editor*

NWA PUBLICATIONS AVAILABLE

Monograph 2-86 (Reprinted May 1993), "Satellite Imagery Interpretation for Forecasters," compiled and edited by Peter S. Parke. Cost (per set of three volumes): \$38.00 for NWA members; \$51.00 for nonmembers.

Publication 1-88, "The Cloud Chart 1, 2, 3" by Mike Mogil and Sol Hirsch consists of three 12" x 24" posters containing more than three dozen color photos of clouds with accompanying text. Cost: \$7.50 for members; \$9.50 for nonmembers. **Buy TWO sets for \$13** (members); \$18 (nonmembers) and give one to a science teacher.

Publication 2-88, "Polar Orbiter Satellite Imagery Interpretation," a script/slide training program, written by Vincent J. Oliver and prepared by NESDIS, contains 76 slides with accompanying text. Cost: \$70.00 for NWA members; \$84.00 for nonmembers.

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