

PRESIDENT'S MESSAGE

I asked the NWA Executive Director to compose this month's message on any subject. He chose to write on **continuing education and training**, which is certainly important to us all — for as long as we live. Continual learning has become a way of life with the progressive advances in the atmospheric sciences, in technology, and in the growing realization by industry, commerce and the general public that accurate and timely weather support services are important in daily decision making.

- Les Lemon

Les caught me in my annual task of reading letters from weather broadcasters requesting that their NWA Seal of Approval for radio or television weathercasting be recertified. Members who earn the NWA Seal of Approval have to qualify based on experience, take a written exam and have their on-air performances rated by a panel of peers. Every three years, the Seal has to be recertified through continuing education and training.

There are many ways for weather broadcasters to develop professionally. They may take more college courses, attend conferences such as the NWA Annual Meeting where workshops provide hands-on training, obtain familiarization training at a local National Weather Service office, or accomplish a mix of learning opportunities. The full statement of qualifications and procedures for the Seal is on the NWA Web site.

Most, if not all, broadcasters run busy lives and they are to be commended for taking the time and initiative to earn the NWA Seal of Approval and to keep it valid by accomplishing continued education and training.

Many other NWA members are to be commended for helping to provide education and training opportunities for weather broadcasters. Many volunteer to run workshops at the NWA Annual Meetings and at NWA chapter meetings. Many National Weather Service forecast office personnel volunteer their time and office resources to provide familiarization and review training to broadcasters. In turn, broadcasters provide a user perspective for continued education of NWS forecasters. All concerned gain from this interchange and the best outcome is that the general public obtains a better product.

At the last NWA Council meeting, discussions ensued on finding ways to improve coordination and cooperation among local groups of weather broadcasters, NWS forecasters, emergency managers and others concerned. Fostering more TEAMWORK has also become a primary goal of our NWA President this year. By the next Council meeting in October 2001, it is hoped that we will have a long list of examples of groups across the country where increased cooperation and coordination have improved weather support services to the general public. Greater cooperation and coordination can occur as individuals and groups learn more about each other's missions, capabilities and limitations — i.e., continuing education. ***Let us know what's happening in your community?***

NWA Seals of Approval that had to be recertified by 31 December 2000 numbered 179 and it was very uplifting to read of the great continuing education accomplishments of our members. Unfortunately, a few Seals have to be revoked for individuals not recertifying or not renewing their NWA membership. At the end of January 2001, records showed a total of 637 NWA Seals of Approval had been earned since the program began in 1982. Of those 637, only 476 Seals are still valid and held by members in good standing.

- Kevin Lavin

"If a little knowledge is dangerous, where is the man who has so much as to be out of danger?"

Thomas Henry Huxley

**** IMPORTANT DATES ****

- | | |
|------------------------------------|--|
| <u>15 April 2001</u> | <i>Arthur C. Pike Scholarship Applications due</i> |
| <u>1 June 2001</u> | <i>NWA Annual Meeting Abstracts due</i> |
| <u>15 June 2001</u> | <i>Meteorological Satellite Applications Award submissions due</i> |
| <u>30 June 2001</u> | <i>NWA Annual Award nominations due</i> |
| <u>1 August 2001</u> | <i>Sol Hirsch NWA Education Fund Grant applications due</i> |
| <u>13 - 19 October 2001</u> | <i>NWA 26th Annual Meeting</i> |

According to the NWA bylaws, renewal dues for 2001 are delinquent after 1 March.

NWA COMMITTEE CHAIRPERSONS

Commissioner of Committees (non-voting, appointed member of the NWA Council):

David I. Knapp, 7416 N Oakland Ave, Kansas City, MO 64158; NWS/NCEP Aviation Weather Center (816) 584-7238; Dknapp@awc.kc.noaa.gov

Aviation Meteorology Committee Co-chairs:

Carolyn M. Kloth, NWS/NCEP Aviation Weather Center, 7220 NW 101st Terrace Room 105, Kansas City, MO 64153-2371; (816) 584-7226; Ckloth@awc.kc.noaa.gov

Terry T. Lankford, 4517 Sutter Gate Avenue, Pleasanton, CA 94566; (925) 462-7485; tlank@pacbell.net

Awards Committee:

Andrew H. Horvitz, 1108 Downs Drive, Silver Spring, MD 20904; NWS HQ W/OS7 (301) 713-1867 x125; FAX: (301) 589-1321; Andy.Horvitz@noaa.gov

Broadcast Meteorology Committee:

Richard E. Apuzzo II, 1347 Minaret Court, Cincinnati, OH 45230; WXIX-TV, (513) 421-1919; skyeye@fuse.net

- Broadcaster Seal of Approval Committee:

Alan Sealls, WKRG-TV Meteorologist, P.O. Box 160587, Mobile, AL 36616; (334) 662-2996; SEALLS@aol.com

- Evaluation Board members for Seal of Approval: Ruth Aiken, Richard E. Apuzzo II, Douglas Butts, Jr., Dick Elder, Rob Fowler, Jose' M. Garcia, Jr., Michael Goldberg, Tim Heller, Rodney Hill, Kristine Kahanek, Chuck Lofton, John McLaughlin, Keith Monahan, Lisa Mozer, Lawrence Rice, Tom Sherry, Lisa Spencer, Roland Steadham, Sandy Thomson, and John Toohey-Morales

- Seal Recertification Chairperson:

Chuck Lofton, WTHR-TV, 1000 N Meridian Street, Indianapolis, IN 46204; (317) 271-2664; WTHR@aol.com

- Testing Chairperson:

Dr. Paul J. Croft, Dept of Physics & Atmos Science, Jackson State University, PO Box 17660, 1400 Lynch Street, Jackson, MS 39217-0460; (601) 979-7012; pcroft@stallion.jsums.edu

- Public Relations Chairperson:

Richard E. Apuzzo II, 1347 Minaret Court, Cincinnati, OH 45230; WXIX-TV (513) 421-1919; skyeye@fuse.net

- Program Chairperson:

Kristine Kahanek, WFAA-TV, 606 Young Street, Dallas, TX 75202; (214) 977-6508; kkahanek@wfaa.com

Corporate Affairs Committee:

John A. Lasley, Jr., 3723 Capulet Terrace, Silver Spring, MD 20906-2645; (301) 598-4636; jlasley@peoplepc.com

Education Committee:

Sol Hirsch, 3809 Clarks Lane, Suite 007, Baltimore, MD 21215; (410) 764-6080; FAX: (410) 764-6160; 71232.2755@CompuServe.com

Home Page Advisory Committee:

Frank C. Brody, 907 Plum Falls Court, Houston, TX 77062; NWS/SMG Johnson Space Center (281) 483-5639; Frank.Brody@jsc.nasa.gov or fbrody@aol.com

- Home Page curators: Stacy L. Bunin and Steven Listemaa

Local Chapter Committee:

Gary S. Petti, NOAA/NWSFO MIC, 465 Weathervane Road, Calera, AL 35040; (205) 621-5646; Gary.Petti@noaa.gov

Membership Committee:

Floyd F. Hauth, 379 Spike Island Road, Osceola Mills, PA 16666; (814) 339-7778; fhauth@netphd.net

Nominating Committee:

John B. McLaughlin, KCCI-TV Director Broadcast Meteorology, 888 Ninth Street, Des Moines, IA 50309-1288; (515) 247-8888; Johnmc@dwx.com

Remote Sensing Committee:

Frances C. Parmenter-Holt, NOAA/NESDIS E/RA2, Chief, Satellite Applications Lab, NOAA Science Center, Room 601, Washington, DC 20233; (301) 763-8282; fran.holt@noaa.gov

Specialized Operational Services Committee:

Hugh G. McRandal, Jr., 4416 Lord Loudoun Court, Upper Marlboro, MD 20772-5927; NOAA/NWS/NCEP Marine Prediction Center (301) 763-8441; Hugh.McRandal@noaa.gov

Strategic Planning Committee (is chaired by the immediate-past President):

Roderick A. Scofield, 8850 Lowell Road, Pomfret, MD 20675; (301) 763-8251; Roderick.Scofield@noaa.gov or Cbstorm@aol.com

Training Committee:

Gail I. Hartfield, 110 Horne Creek Ct., Apex, NC 27502-5204; NOAA/NWSFO Raleigh, NC; (919) 515-8200; Gail.Hartfield@noaa.gov

Weather Analysis and Forecasting Committee:

Alan E. Gerard, 523 Spring Hill Drive, Madison, MS 39110; NOAA/NWSFO Jackson, MS; (601) 939-2786; Alan.E.Gerard@noaa.gov

Contact these members to volunteer your time, talents and ideas. For more information on the committees, their members, goals and initiatives, please browse to the committee pages on the NWA Web site at www.nwas.org

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

Tel/FAX: (334) 213-0388

E-mail: NatWeaAsoc@aol.com Internet Web site: www.nwas.org

Submit newsletter items directly to: Editor NWA Newsletter, Eli Jacks, NWS HQ W/OS6, 1325 East West Hwy Room 13314, Silver Spring MD 20910-3283; e-mail: Elliott.Jacks@noaa.gov or to: Larry Burch, 1527 South Wasatch Drive, Salt Lake City UT 84108 e-mail: Larry.Burch@noaa.gov 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 Internet 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.

NWA AWARDS PROGRAM 2001

The National Weather Association began its award program in 1977 to provide deserved recognition to those individuals involved in operational activities. The Awards Program recognizes the professional as well as the volunteer. The emphasis is on the people who perform the day-to-day jobs of providing meteorological information and weather support services to the public. Names of previous winners and additional award information are available on the NWA Web site (www.nwas.org).

Award Categories are:

Operational Achievement Individual Award: The award is presented **to an NWA member** who has made a significant contribution to operational meteorology (e.g., an accurate and timely forecast for one or more significant weather events or for long-period achievement).

Operational Achievement Group Award: The award is presented to a group of two or more individuals for a significant contribution to operational meteorology. **At a minimum, a majority of the group (greater than 50%) must be NWA members.**

T. Theodore Fujita Research Achievement Award: This award is presented **to an NWA member** whose research has made a significant contribution to operational meteorology.

Walter J. Bennett Public Service Award: This award is presented to an individual or organization directly assisting the meteorological community in providing weather-related information to the public. Individuals and organizations in the meteorological profession are **ineligible** for this award.

Public Education Award: This award is presented to an individual or organization providing significant contributions to increase the public's weather awareness.

Broadcaster of the Year Award: This award is presented **to an NWA member** Radio or Television weathercaster, or other member of the broadcast media, whose activities have significantly contributed to the development and presentation of weather information to the public service.

Aviation Meteorology Award: This award is presented to an individual or group to recognize significant contributions to aviation meteorology, such as impact of operational forecasts on aviation operations, and advances in aviation meteorology including research in detection and forecasting of aviation hazards.

Local Chapter Award: This award is presented to a Local Chapter of the NWA whose activities have significantly increased awareness of the weather and of the NWA in their local area.

The Larry R. Johnson Special Award: This award is presented to an individual or a group to recognize unique events or extraordinary accomplishments, which significantly contributed to operational meteorology.

Member of the Year Award: This award is presented **to an NWA member** who has made significant contributions to the organization over a period of time.

Narrative nominations (no more than two pages) with additional comments or endorsements should be forwarded by 30 June 2001, to: NWA Awards Committee, Andrew Horvitz, Chairperson, 6704 Wolke Court, Montgomery, AL 36116-2134 USA

Although there is no rigid time requirement for the awards, the Committee prefers that the accomplishment, if not on a continuing basis, occur within 18 months prior to the nominations. Winners will be honored at the NWA Annual Meeting Awards Banquet, 17 October 2001, at the WestCoast Ridpath Hotel in Spokane, WA.

THE NWA METEOROLOGICAL SATELLITE APPLICATIONS AWARD

The Meteorological Satellite Applications Award has been established by the NWA to stimulate interest and foster the study and use of satellite remote sensing data in weather analysis and forecasting. **Undergraduate students are invited to write an original paper on meteorological satellite applications.** Themes of the papers may include original research, case studies, or a survey of applications. The recipient of the award will receive a stipend of \$500 and be invited to present their paper at the NWA Annual Meeting. Frances C. Parmenter-Holt, Chairperson of the NWA Remote Sensing Committee, sponsors this award.

The student must be enrolled as an undergraduate at the time the paper is written and be in good academic standing at the college or university attending. The student also must be a U.S. citizen or hold permanent resident status.

DEADLINE: 15 JUNE 2001

Submission of Papers: Student papers should not exceed ten (10) pages including photographs and appendices. Candidate authors should submit:

- an original and three copies of their paper
- a letter of application with the paper title, university affiliation, and contact information including mailing address, phone, fax, and e-mail address if available
- a letter from their Department Head or other faculty member that confirms the student author was an undergraduate when the paper was written and that the student is in good academic standing at the college or university. Additionally this letter should highlight the original research or contributions the student has made to this paper.

Submissions should be sent by 15 June 2001 to: National Weather Association, Attn: MetSat Applications Award, 6704 Wolke Court, Montgomery AL 36116-2134.

Announcement of the recipient of the award will be made in October 2001. For more information contact the NWA office at (334) 213-0388; NatWeaAsoc@aol.com.

SOL HIRSCH NWA EDUCATION FUND GRANTS

The NWA Education Committee needs help from all members to spread the word **to teachers in grades K-12** that \$500 grants are available annually from the NWA to help improve the education of their students in meteorology. The teachers selected will be able to use the funds to take an accredited course in atmospheric sciences, attend a relevant workshop or conference, or purchase scientific materials or equipment for the classroom. Three grants or more are possible in 2001 thanks to the many members who have contributed to this fund in honor of Sol Hirsch who retired in 1992 after being the NWA Executive Director for 11 years. **Applications can be obtained from the NWA Education Committee, 3809 Clarks Lane Suite 007, Baltimore MD 21215**, from the NWA office or the NWA Web site (www.nwas.org). **Completed applications are due to the Education Committee by 1 August 2001.**

LOCAL CHAPTER NEWS

The Southern New England NWA Chapter held its first meeting of 2001 on 6 February at Bella Costa restaurant in Framingham, MA. The meeting was convened by chapter President Frank Nocera and Vice President Doug Young with 20 members and guests in attendance. Joe D'Aleo from WSI Corporation was the guest speaker. Frank and Doug opened the meeting by welcoming all guests, which included members from the AMS chapter of Greater Boston and the Blue Hill Weather Observers. This continued the chapter's efforts to collaborate with all other local meteorological groups.

Doug and Frank gave a presentation entitled "The 23rd Anniversary of the 6 February 1978 Blizzard across the Northeast Corridor". Many aerial shots from archives of local TV networks and newspapers were displayed, illustrating the magnitude of coastal flooding and the enormous number of vehicles that were stranded on roadways throughout southern New England. The latter were a direct result from inaccurate snowfall forecasts the preceding month. Moreover, the onset of snow occurred slightly later than predicted, but most southern New Englanders dismissed an accurate NWS forecast of heavy snow several days in advance, and commuted to work anyway.

In addition, many facts on the blizzard were presented which included: storm duration of 36 hours that paralyzed the entire region for a week, strongest wind gust-58 kt (67 mph), 1,950 cars abandoned in Greater Providence, 3,500 cars stranded along RT 128 and two thousand homes destroyed along with 54 total lives claimed by the storm in New England. Snowfall totals included: 38 in. at Woonsocket, RI; 32.5 at Rockport, MA; 28.6 at Providence, RI; 27.1 at Boston, MA; 20.2 at Worcester, MA; and 16.9 at Hartford, CT. Remarkably, it was the month's only measurable snowfall!

On the 500-mb map, Frank noted that the strong cutoff anticyclone west of Hudson Bay at 0000 UTC 7 February, was perhaps the most significant weather feature for this mammoth event. This cutoff anticyclone provided two crucial ingredients for a major snowfall over the Northeast. First, it resulted in a splitting of the jet stream into two branches leaving behind a weak wind field aloft across the western and central lower 48

states. This allowed a cutoff low over the mid-Atlantic states to meander slowly northeast for 24 to 36 hours, thus prolonging the snowfall. Furthermore, the surface map on 1200 UTC 6 Feb featured a 1052 mb high associated with the cutoff anticyclone, which extended eastward through Ontario and Quebec. This feature combined with intensifying low pressure off the New Jersey coast to greatly enhance the moist Atlantic inflow across southern New England, yielding to historic snowfall totals along with strong winds exceeding blizzard criteria.

Guest speaker Joe D'Aleo from WSI discussed several of the oceanic - atmospheric oscillations across the globe. He began his talk with the climate impact of El Niño and La Niña across the lower 48 states. El Niño is characterized by cutoff cyclones and anticyclones, such as in the Blizzard of 6 February 1978 over the northeast discussed earlier. Other characteristics include a closed cyclone over the north Pacific and a trough of low pressure across the southeast states. In addition, a positive Pacific-North American (PNA) pattern is observed, with a strong upper-level ridge over the western US extending north into British Columbia. This is manifested by warmer than normal sea surface temperatures across the eastern central Pacific. La Niña is just the opposite with cooler than normal sea surface temperatures over the eastern central Pacific basin. This results in a ridge of high pressure across the central Pacific, with a progressive jet stream over the US and displaced southward, exiting the mid-Atlantic states.

Joe classified a neutral La Niña/El Niño season as La Nada, which has dominated this winter season until recently, as current indices suggest La Niña resurfacing. Another important oceanic - atmospheric oscillation impacting the northeast U.S. is the North Atlantic Oscillation (NAO). The negative phase of the NAO represents higher than normal heights over Greenland and Iceland, with below normal heights across the Azores. This results in colder than normal air from the eastern half of Canada, surging southward across the eastern third of the U.S., along with placing the jet stream/storm track just southeast of New England. Thus, above average snowfall along with below normal temperatures are featured. Conversely, the positive phase is characterized by below normal heights over Greenland and Iceland, with above normal heights across the Azores. This yields a strong jet across the north Atlantic with cold air being drained from the polar region into northern Europe. Across the lower 48 states a fast zonal Pacific flow dominates with near to above normal temperatures.

Joe also talked about the Quasi-biennial oscillation (QBO), which is a west to east oscillation in the stratosphere over the tropics. This oscillation is a key factor for forecasting the strength and activity of the hurricane season, as above normal winds in the stratosphere yield to more shearing and thus less conducive for hurricane formation. Joe has shown some skill in forecasting the large-scale pattern when an analysis of El Niño/La Niña is combined with the QBO. Furthermore, the key to climate forecasting is assessing the magnitude of each oscillation (strong positive phases, weak negative phases, etc.).

- Frank Nocera

For more information and links to Local Chapters, please check out the NWA Web site (www.nwas.org) and click on the Local Chapter block. If you are interested in starting a NWA Local Chapter contact Gary Petti, the committee chairperson (see page 2).

NCEP NOTES

This is the first of a continuing series of articles designed to provide insight into the products and activities of the NOAA/NWS National Centers of Environmental Prediction (NCEP). This first installment includes a summary of the models that currently make up the NCEP operational numerical prediction suite. Future articles will deal with other aspects of NCEP operations and activities.

COMPUTING RESOURCES

NCEP's mainframe computer is an IBM SP composed of 552 nodes with 4 CPUs per node for a total of 2048 processors for application purposes and an additional 160 to support the I/O system and interactive use. This computer is 42 times faster than the Cray-C90 it replaced. It has about 500 times more memory. This computer has helped NCEP achieve an on-time product delivery rate of greater than 95% each month since the Crays were removed from operations and all communication and computing systems were moved from the Federal Complex in Suitland, MD to the Census Computing Center in Bowie, MD. The average on-time delivery for the last 10 months has been 97.8 %, with the best month, January 2001, at 99.2 %.

GLOBAL MODELS

The Aviation (AVN) run: a spectral model with a horizontal resolution of approximately 75 km (T170) and 42 levels in the vertical. It is run four times per day (every six hours) producing forecasts out to 126 hours at 0000Z and 1200Z and out to 84 hours at 0600Z and 1800Z.

The Medium-Range Forecast (MRF) run: a spectral model run once per day (at 0000Z) producing a forecast out to 384 hours (16 days). It has 42 levels in the vertical and is run out to 168 hours (7 days) with an approximate horizontal resolution of 75 km (T170). After 168 hours, the MRF's horizontal resolution is reduced to 210 km (T62) with 28 levels in the vertical.

The Global Ensemble: a set of 23 ensemble forecasts run daily out to 16 days with an approximate horizontal resolution of 105 km (T126) for the first 84 hours of the forecast and 210 km (T62) thereafter out to 16 days (384 hours). It has 28 levels in the vertical. The purpose of the ensemble runs is to provide uncertainty estimates for the medium-range forecasts.

REGIONAL MODELS

The Mesoscale Eta: a gridpoint model with a horizontal resolution of 22 km with 50 levels in the vertical. It is run four times per day (every six hours) producing a forecast out to 60 hours at 0000Z and 1200Z and out to 48 hours at 0600Z and 1800Z. The model's domain covers the North American continent and extends into the Pacific Ocean past Alaska and Hawaii as well as eastward into the Atlantic Ocean. In March, the Mesoscale Eta will be

extended out to 84 hours at 0000Z and 1200Z. Its resolution is planned to be increased to 12 km in the horizontal and 60 levels in the vertical by November.

The Rapid Update Cycle (RUC): a gridpoint model with a horizontal resolution of 40 km and 40 vertical levels. Its domain covers the contiguous United States and the nearby ocean areas. It is run hourly. Every three hours (8 times per day), the RUC produces a 12-hour forecast. At the in-between runs (the other 16 hours), a three-hour forecast is run. The resolution of the RUC is to be increased to 20 km in the horizontal and 50 levels in the vertical by summer 2001.

The Nested Grid Model (NGM): a gridpoint model with an 85 km horizontal resolution inner grid covering the North American continent and an outer grid covering the Northern Hemisphere at a resolution of 170 km. The NGM has 16 vertical levels. It is run twice per day producing a forecast out to 48 hours. Development on the NGM has been frozen since late 1990. The termination of this model will be considered after an equivalent set of statistical guidance is available from other models.

HURRICANE MODEL

Geophysical Fluid Dynamics Laboratory (GFDL) Hurricane Model: a triple-nested gridpoint model with resolutions of 1.0, 1/3 and 1/6 degree latitude/longitude and 18 vertical levels. The outermost domain extends 75 degrees in the meridional and longitudinal directions. It is run as needed for up to four separate storms at a time up to 4 times per day. It is run out to 120 hours at 0000Z and 1200Z, and out to 72 hours at 0600Z and 1800Z. For the 2001 Atlantic Hurricane Season, a coupled ocean-atmosphere model will be implemented.

Descriptions of NCEP **Climate Models** and **Ocean Models** will be described in later articles. For further information and updates browse to Web site: www.emc.ncep.noaa.gov/modelinfo/index.html

- Lauren Morone, NWS / NCEP

OTHER NWP MODEL NOTES

Jerry LaRue has been monitoring NWP models and noticed changes in the European Centre for Medium-Range Weather Forecasts (ECMWF) model output. He sent the centre an e-mail and received this answer. "Well spotted! ECMWF made a major change to its forecasting system in November 2000 by increasing the resolution in the forecast model and the data assimilation system. Under Press Room on our Web site (www.ecmwf.int) you will find the following information: ECMWF increased the resolution of its global atmospheric model from TL319 to TL511 on Tuesday, 21 November 2000. This is roughly equivalent to a reduction from 60 km to 40 km grid size. The resolution of the data assimilation minimization was increased from T63 to TL159."

MEETING NEWS

• **NWA 26th Annual Meeting, 13-19 October 2001**

The National Weather Association's 26th Annual Meeting will be held at the WestCoast Ridpath Hotel, 515 W. Sprague Avenue, Spokane, Washington 99201 from Saturday, 13 Oct 2001 through Friday noon, 19 Oct 2001.

The Annual Meeting will include:

13-14 Oct: BROADCASTER WORKSHOPS beginning late Saturday and continuing all-day Sunday will include special presentations, exhibits and hands-on workshops appropriate to continuing education for weathercasters, but open to all interested. The annual TAPE SWAP will be on Sunday evening. A separate TAPE SWAP for mentoring students is being considered.

The Aviation Meteorology Committee is also planning a training workshop for 14 October 2001.

15-19 Oct: ANNUAL MEETING GENERAL SESSIONS from Monday morning through noon on Friday will include a mix of formal presentations, poster sessions, training workshops, and exhibits on a wide variety of topics relating to OPERATIONAL meteorology, hydrology, weather broadcasting, new research applications, and related activities. A special workshop on Downbursts is being planned by William Roeder of the Weather Analysis & Forecasting Committee. The Annual Awards Banquet will be on Wednesday evening.

The Annual Meeting Program Chairperson is John Livingston, National Weather Service Forecast Office, Spokane, WA, (509) 244-0110x222, E-mail: John.Livingston@noaa.gov.

The Broadcaster Workshop Chairperson is Kristine Kahanek of WFAA-TV, Dallas, TX, (214) 977-6508; kkanek@wfaa.com

ABSTRACT SUBMISSION: The deadline for submission of abstracts is 1 June 2001. Abstracts can be sent via e-mail to the Program Chairperson at John.Livingston@noaa.gov. Please write "NWA Abstract" in the subject box. The abstract may be included within the body of the e-mail or as an attachment. Please include the following information in the e-mail message: full abstract title, author(s) name(s) and affiliation(s)/address(es) [designate which author(s) will be giving the presentation and whether poster or oral presentation is preferred], audio/visual requirements including software (e.g., PowerPoint, Corel, Internet access) and equipment (e.g., laptop PC, overhead projector), and list the primary contact with their phone number and e-mail address.

ABSTRACTS may also be sent online via the NWA Web site: www.nwas.org/2001abstracts.html. Simply fill out the form in its entirety (you may cut-and-paste your abstract from your word processor into the form), and click on the "Submit Query" button.

If you are unable to submit your abstract electronically please contact John Livingston or the NWA office.

For information on exhibits, accommodations, registration and the overall meeting program, please contact the NWA office at Tel/FAX: (334) 213-0388 or e-mail: NatWeaAsoc@aol.com. Meeting registration fees will be similar to last year and will be published by June 2001 in the Newsletter and on the NWA Web site (www.nwas.org). The meeting agenda will be posted on the Web site and Newsletter in August 2001.

ANNUAL MEETING HOTEL INFORMATION: The WestCoast Ridpath Hotel is in downtown Spokane, Washington. The NWA discount hotel rates are: \$63 for single and \$73 for double/triple/quad. Please call 1-800-325-4000 for reservations and request National Weather Association's special conference rates.

• **23rd Annual National Hurricane Conference will be held 9-13 April 2001** at the Omni Shoreham Hotel in Washington, DC. For more information visit Web site: www.HurricaneMeeting.com Teri Besse is the conference coordinator and can be contacted for more information or to discuss exhibit space, advertising or sponsorships at (850) 906-9224 or mail@hurricanemeeting.com

• **5th Annual Ohio Severe Weather Symposium** sponsored by the Ohio State University Meteorology Club will be held on **Friday, 27 April 2001** at The Fawcett Center, 2400 Olentangy River Road, Columbus, Ohio. Information is at Web site: twister.sbs.ohio-state.edu/NWA members Greg Elsaesser and Eric Wilhelm are Co-Head Coordinators. E-mail your name and affiliation to elsaesser.2@osu.edu or wilhelm.51@osu.edu to let them know you will be attending. Symposium is open to all.

• **GOES Users Conference** will be held **22-25 May 2001** in the NIST Auditorium in Boulder, Colorado. The conference is aimed to: Inform users of future capabilities and potential applications; Determine user needs; Assess user and societal benefits of future systems; and, Develop methods to improve communication between NOAA's NESDIS and the GOES user community. Jim Gurka of NESDIS is program chairperson. For more information see Web site: www.osd.noaa.gov/conference.

• **SHORT COURSE: Studies in Weather Analysis and Forecasting, 18-28 June 2001**. The Science center for Teaching, Outreach, and Research on Meteorology (the STORM Project) at the University of Northern Iowa (UNI) is sponsoring an applied weather analysis and forecasting course for undergraduate atmospheric science students and pre-college science teachers. STORM is a cooperative program between NOAA and UNI. The STORM Project will provide housing, meals, course materials, and 3 hours of academic credit (undergraduate or graduate) at **no charge**. To apply, see Web site: www.uni.edu/storm/swaf1.htm. **Apply by 30 April 2001.**

• **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

• **Weather Analysis and Forecasting Issues in the Central United States.** The NWA Weather Analysis and Forecasting Committee, the Department of Soil and Atmospheric Sciences at the University of Missouri-Columbia, and the Missouri Climate Center announce their first conference on Weather Analysis and Forecasting Issues in the Central United States. **The conference will be held at the University of Missouri-Columbia, 30 November – 2 December 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.snd.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.

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.)

THE WEATHER CHANNEL® Quality Assurance (QA) Meteorologist. If you are interested in this opportunity, please send your resume to: Jobs@weather.com with "MET QA" in the subject of your Email. Please reference the NWA as advertisement source. **OVERALL RESPONSIBILITIES:** The QA Meteorologist will be part of The Weather Channel's Global Forecasting Center (GFC) organization reporting directly to the Director, GFC on a day-to-day basis. Central to the role will be ongoing verification and QA of all Global forecast products including the reporting of results. This will ensure that the feedback generated from the Quality Assurance process is funneled directly back to the Weather Systems Development group for integration into the forecast improvements and differentiated data acquisition. **Specific Responsibilities:** Maintain effective forecast verification information for all Global locations. Provide effective reports on forecast verification. Liaison with product/platform groups to identify critical markets. Provide forecast improvements requests to the Weather Systems Development group. Work with the Director, GFC to tune the Concept of Operations of the GFC. **Qualifications Knowledge - REQUIRED:** Master of Science in Meteorology, or Bachelor's in Meteorology Master's degree in Meteorology with emphasis in international

forecasting preferred. Candidates with Bachelor's degree in Meteorology with sound forecasting experience demonstrated through previous job performance, strong recommendations, and academic excellence will be considered. Academic background in statistics will be a distinct advantage. Skills: Professional meteorologist with sound forecasting background and a good understanding of available data sets and computer based forecast systems. Familiarity with Statistics Software package will be an asset. Good understanding of weather forecast verification required. Should be knowledgeable about Geographic Information Systems.

BASIC COMMERCE AND INDUSTRIES, INC.

Employment Opportunities: Entry level Meteorologist/Computer Scientist. Full-time employment at William J Hughes Technical Center, Atlantic City Int'l Airport
Education/Experience: Understanding Meteorological Sensors and Model Data; Good Writing Skills Required; Experience with Sun Workstations and PCs including Solaris Applications and MS Office applications necessary; Experience with software development for WEB and graphical applications of weather data in C or VB desired. **Job Description:** Duties to include Data Reduction and Analysis of Weather Data received from Weather systems and sensors, including radars. Test and verification of Weather System hardware and software upgrades and supporting efforts related to aviation weather research activities. Writing of reports related to research of weather model data comparisons with other pertinent weather data. Specific duties may require elementary programming skills to generate software scripts to retrieve weather data from various sources and perform Data Reduction and Analysis (DR&A). **Qualifications:** Requires a minimum of 4 college years with BS Degree and course work including a high level programming language, understanding of computer networks, and technical writing. Must have excellent oral communication skills and be a team player. Salary commensurate with experience and qualifications. E-mail resume to: jlolivo@bellatlantic.net Attention: Jim Olivo, BCI

BARON SERVICES, INC. Baron Services, Inc. is a multi-million dollar company supplying Doppler radar and sophisticated weather displays to a client base that includes nearly 400 television, radio, emergency management and governmental units. Our continued growth has led to the need for programmers (C/C++ in Windows environment), meteorological research and modeling professionals, Doppler radar managers and technicians, and sales professionals. Confidential resumes and salary history should be addressed to: Rose Marie Phillips, Human Resources, Baron Services, Inc., 4930 Research Drive, Huntsville, AL 35805 or by e-mail to rmphillips@baronservices.com.

EARTH SATELLITE CORPORATION, named in 2000 to the Maryland Technology's "Fast 50" list of fastest growing technology companies, is an innovative company, which for 30 years has conducted resource programs around the world for private and public clients. EarthSat has performed over 350 studies in the fields of forestry, land use, environmental analysis, change detection, GIS, military applications, mineral exploration and agriculture. EarthSat provides weather and agricultural information to more than 200,000 customers every day. We are **seeking a Manager, New Business Development**, an aggressive results-oriented individual to develop a new

business area under the guidance of the Director, CROPCAST/Weather Services. CROPCAST integrates meteorological and high resolution satellite data with crop model simulations and ground inventories to provide continuously updated weather information to commodity traders, importers, exporters and food companies so they can better manage the impact of weather on their businesses. EarthSat Energy Weather clients include major energy conglomerates, utilities, trading houses, investment firms, and oil and gas producers/suppliers. The qualified candidate will possess sales/marketing experience, as well as a degree in meteorology/agronomy or substantial experience in these fields. Excellent written and verbal communication skills required, as well as excellent organizational skills. You will sell our agriculture and weather related products to both government and commercial sectors. You will be based out of Rockville, MD (suburban D.C.) location. This position will require considerable domestic and international travel. Salary potential over \$100K. Excellent comprehensive benefits package includes fully paid medical, dental, life, and short/long-term disability insurance, vacation and sick leave, 401(k) retirement plan, Flexible Spending Account, profit sharing plan and tuition assistance. EarthSat is an Equal Opportunity Employer. Please send resume to: Earth Satellite Corporation, Attn: HR Department, 6011 Executive Blvd., Suite 400, Rockville, MD 20852; Fax: 301-231-5020; e-mail: hrdept@earthsat.com

WEATHERBANK, INC. has immediate openings for meteorologists at various levels. Successful candidates will be responsible for forecasting a variety of weather parameters and issuing alert statements for industrial and commercial clientele across North America. Each applicant should have at least a B.S. in Meteorology or a related field. Pending degrees are reviewed on an individual basis. Professional forecasting experience, a strong and positive work ethic, and working knowledge of Microsoft® dos, Windows® 98/2000/NT, and Microsoft Excel® are desirable. Most openings are full-time, salaried positions and include WeatherBank's full compliment of benefits including: life, disability, dental and health insurance packages; Cafeteria 125 and 401K plans; paid sick leave, vacations and holidays. Send your resume via fax or E-mail to the attention of: Mr. Steven Root, CCM, President & CEO WeatherBank, Inc., 1015 Waterwood Pkwy Suite J, Edmond OK 73034; Fax: (405) 341-0115; E-mail: sroot@weatherbank.com

NATIONAL WEATHER ASSOCIATION
6704 WOLKE COURT
MONTGOMERY AL 36116-2134

THE WEATHER CHANNEL® The Meteorology Department of The Weather Channel is seeking outstanding candidates for potential future behind-the-scenes openings. Proficiency in weather analysis and forecasting is a necessity. Optimum qualifications include a Bachelor's degree in Meteorology or equivalent educational background plus at least 3 years full-time operational experience, or a Master's degree plus at least one year of operational forecasting experience. Other necessary attributes include strong communication skills, nationwide forecasting experience, and basic computer skills in a Windows environment. Experience with TV weather graphics is a plus. Working well in a team environment, strong interpersonal skills, attentiveness to detail, flexibility, and the ability to focus on customer needs and meet critical deadlines are essential. Weekend, night and/or early morning work may be required to help support our 24 hour a day, 7 day a week operation. Applicants should mail a cover letter and detailed resume to: Stu Ostro, Weather Communications Director, The Weather Channel, 300 Interstate North Parkway Atlanta, GA 30339. No phone calls please. EOE.

DTN/KAVOURAS WEATHER SERVICES has an immediate job opening for an Operational Meteorologist working in our Meteorological Operations Division at our home office in Burnsville, MN. Applicants should have a B.S. degree in meteorology or atmospheric science and possess keen synoptic meteorology skills enabling the successful candidate to make time critical risk assessment judgements. Excellent computer skills are a plus. The Meteorological Operations Division is a state-of-the-art (24/7) forecast operation located several miles south of Minneapolis, MN. Benefits include health and dental coverage, paid time-off, flexible spending account, and an excellent 401(k) savings plan. If you are interested in joining one of the largest and fastest growing weather and climate forecast teams serving media, aviation, energy, and agriculture industries please send a resume to: DTN/Kavouras, Human Resources, 11400 Rupp Drive, Burnsville, MN 55337-1279; Fax: (952) 882-4500; E-mail: employee.recruiting@dtm.com Visit our Web sites for more information: www.kavouras.com, wx.com, dtm.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.