



NOAA's NATIONAL WEATHER SERVICE Western Region Notes

September 30, 2007

REGION DIRECTOR'S OFFICE

NOAA Administrator's Award Recipients: Please join me in congratulating this year's Western Region recipients of the NOAA Administrator's Awards:

Virgil Middendorf, WFO Billings, for development of a standard tabular spot forecast formatter which improves the quality and consistency of information provided to National Weather Service customers.

Tim Barker, WFO Boise, for developing a suite of verification software that provides NWS Forecast Offices with the ability to monitor and improve the performance of gridded forecasts.

Andrea Bair and Jenna Meyers, Western Region HQ HCSD, (WR members of a team award), for conceiving the original idea, developing the scientific process, designing and testing the product, and implementing the Local 3-Month Temperature Outlook: NOAA's 'first' local climate forecast product designed to meet a wide range of customer needs.

Joseph Dandrea, WFO San Diego; Jayme Laber, WFO Los Angeles; Michelle Schmidt, CBRFC; Kevin Werner, Western Region HQ SSD; (WR members of a team award), for the successful planning, implementation and initial deployment in the San Diego and Oxnard Hydrologic Service Areas of the first NOAA/USGS Debris-Flow Warning System.

Nancy Dean and Troy Nicolini, WFO Eureka, (WR members of a team award), for implementing the Simulation of Waves Nearshore (SWAN) model at the NWS Forecast Office in Eureka, California and adapting it for NWS operations.

Andrea Bair, Western Region HQ HCSD and Heather Dohan, CWSU Auburn, (WR members of a team award), for creating new climate information products and services in response to increasing customer requests so that local and national decision makers can make economically, socially, and environmentally sound choices.

The awards ceremony recognizing these recipients, as well as the recipients from the other regions was held in Silver Spring, MD, on September 25th.

Flagstaff Meteorologist Returns from tour in Iraq: Clair Ketchum, Meteorologist, WFO Flagstaff, recently returned from a military deployment to Iraq. Clair is a Second Lieutenant in the Air National Guard, and was deployed to northern Iraq in support of the 25th Infantry Division. In Clair's words: "My two team members and I were stationed at Forward Operating Base (FOB) Diamondback, located in northern Iraq. We operated a base weather station that was open 24x7. My responsibility as the staff weather officer included giving numerous briefings, attending meetings, and providing any type of weather information to US Forces in

support of ongoing operations. While it was extremely hot in Iraq, we also encountered a number of dust storms (got some cool pictures). The weather there was extremely unpredictable since we were in the dry season - we were not supposed to see any clouds, dust, rain, or thunderstorms, but we saw everything that I listed. Of course, not having any good equipment like radar, updated satellite imagery, a mesonet, a spotter list, etc, helped to really complicate matters!

I want to say thanks to everyone out there who supported my team and me during our stint in the sandbox. We got a lot of letters, cards, and care packages from folks around the Region and it was a big morale booster for us. So, thank you all!"

Thank you, Clair, for your service, and welcome home!

METEOROLOGICAL SERVICES DIVISION

Fire Weather: The 2007 fire season has been an active one. Over 6.5 million acres have burned nationally, compared to a 10-year average of about 5 million acres. In Western Region (WR) alone, over 4.5 million acres have burned this year. In response, WR Weather Forecast Offices (WFOs) have issued nearly 6,000 spot forecasts so far this year. The 34 Incident Meteorologists (IMET) in WR have been dispatched over 80 times, comprising some 80% of national dispatches for 2007. Depending on the severity of the Santa Ana wind season in California, IMET dispatches could rise again in October and November. Thanks to the IMETs in the field and those who support them. Their help in providing forecasts to firefighters is invaluable as they save lives and protect property.



Smoke and ash from a wildfire near Winnemucca, Nevada blankets a firefighter camp.

Missoula Staff Conducts Storm Damage Survey of Severe Thunderstorms in Northwest Montana: Disaster and Emergency Services Coordinators of Lake, Flathead and Lincoln Counties in northwest Montana praised WFO Missoula staff for an outstanding job of getting the word out for severe thunderstorms and a possible tornado that impacted northwest Montana during the evening of July 18. Average lead time for the severe storms was 24 minutes. WCM, Peter Felsch briefed emergency responders 5 hours prior to storms arrival. Local amateur radio club members activated SKYWARN from the Missoula office, gathering valuable storm spotter information. Citizens interviewed during the Missoula staff storm damage survey, mentioned that phone calls from neighbors and relatives about tornado warnings alerted them of the seriousness of the situation and gave them a heads up to take shelter.

WFOs Portland and Eureka Participate in the biennial Coastal Zone Conference: WFOs Portland and Eureka participated in the biennial Coastal Zone conference that was held in Portland, OR during the week of July 23-26, 2007. This conference is the largest international gathering of ocean and coastal management professionals in the world which provides a forum to discuss the issues facing our world's coastlines and oceans. Vice Admiral Lautenbacher and Leon Panetta were the keynote speakers at the conference which had over 850 people in attendance.



L to R: Troy Nicolini, WCM Eureka and Doug Harper, NOAA Coastal Storms Project, demonstrating the near-shore wave model at the Coastal Storm Booth.



L to R: Carey Morishige, NOAA Pacific Service Center, Tyree Wilde, WCM Portland, Troy Nicolini, WCM Eureka and Meagan Forbes, NOAA Marine Debris Program staffing the Weather and Climate kiosk at "NOAA Alley".

Troy Nicolini, WCM Eureka, gave a presentation on NWS's role in Coastal Hazard Forecasting, which highlighted WFO Eureka's operational use of a near-shore wave model that was developed as part of the Coastal Storms Project to forecast conditions on the Humboldt Bay Bar. He also outlined NWS plans to implement the near-shore wave model at all seven Western Region coastal offices for operational marine forecasting.

Tyree Wilde and Bill Schneider, WCM and SOO from WFO Portland, respectively, also attended the conference and staffed the NOAA outreach booth and Coastal Storms Program Booth along with other NOAA agencies, which included representatives from NOAA's Ocean Service, NOAA Marine Fisheries, NOAA Geodetic Survey and NOAA Coastal Services Center.

Air Quality Alert Products Begin Over the San Joaquin Valley: WFO San Joaquin Valley recently expanded its partnership with the San Joaquin Valley Unified Air Pollution Control District. WFO Hanford began using the new Air Quality Alert (AQA) product header to relay health-related statements from the Valley Air District. AQA's appear on the WFOs clickable map in gray. The first Alert went out on August 14th in response to smoke drifting across the CWFA from the Zaca and Tar Fires in Santa Barbara and Fresno Counties, respectively:

AEUS76 KHNX 141645

AQAHNX

CAC019-029-031-039-047-107-150445-

AIR QUALITY ALERT MESSAGE
NATIONAL WEATHER SERVICE SAN JOAQUIN VALLEY - HANFORD CA
945 AM PDT TUE AUG 14 2007

THE SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT HAS ISSUED AN AIR QUALITY ALERT DUE TO SMOKE IMPACTS FROM WILDFIRES.

TWO LARGE WILDFIRES ARE AFFECTING AIR QUALITY IN THE SAN JOAQUIN VALLEY... PROMPTING LOCAL AIR POLLUTION OFFICIALS TO ISSUE A HEALTH CAUTIONARY STATEMENT.

THE FIRES...THE ZACA FIRE IN SANTA BARBARA COUNTY AND THE TAR CANYON FIRE IN FRESNO COUNTY...ARE EXPECTED TO AFFECT FRESNO...MADERA...MERCED... KINGS...TULARE AND THE VALLEY PORTION OF KERN COUNTIES...DISTRICT FORECASTERS SAID.

BECAUSE OF THE UNCERTAINTY OF WHEN THESE FIRES COULD BE EXTINGUISHED... THE CAUTIONARY STATEMENT IS IN EFFECT INDEFINITELY.

THE DISTRICTS AIR MONITORING STATIONS IN BAKERSFIELD HAVE RECORDED ELEVATED PM10 MEASUREMENTS THIS MORNING AND REPORTS HAVE BEEN RECEIVED OF ASH FALLING IN KERN COUNTY.

EXPOSURE TO PARTICLE POLLUTION CAN CAUSE SERIOUS HEALTH PROBLEMS... AGGRAVATE LUNG DISEASE...CAUSE ASTHMA ATTACKS AND ACUTE BRONCHITIS... AND INCREASE RISK OF RESPIRATORY INFECTIONS.

RESIDENTS ARE ADVISED TO USE CAUTION AS CONDITIONS WARRANT. PEOPLE WITH HEART OR LUNG DISEASES SHOULD FOLLOW THEIR DOCTORS ADVICE FOR DEALING WITH EPISODES OF UNHEALTHY AIR QUALITY. ADDITIONALLY OLDER ADULTS AND CHILDREN SHOULD AVOID PROLONGED EXPOSURE...STRENUOUS ACTIVITIES OR HEAVY EXERTION...AS CONDITIONS DICTATE.

THE AIR QUALITY FORECAST FOR TODAY IS IN THE GOOD TO MODERATE RANGE FOR MOST OF THE VALLEY...EXCEPT TULARE COUNTY...WHICH IS FORECAST TO BE UNHEALTHY FOR SENSITIVE GROUPS. BUT LOCALIZED AIR QUALITY COULD FLUCTUATE DEPENDING ON SMOKE IMPACTS...FORECASTERS SAID.

FOR MORE INFORMATION: VISIT VALLEYAIR.ORG OR CALL THE NEAREST DISTRICT OFFICE FRESNO 559-230-6000 AND BAKERSFIELD 661-326-6900.

Joint Teacher Training: On August 6 and 7, NWS Boise participated in a joint teacher training seminar with NOAA Fisheries, USGS, NRCS, Idaho National Laboratory, University of Idaho, Idaho Department of Environmental Quality, City of Boise, United Water, and Idaho Power. Seventeen teachers attended a 2 day training session titled "Extreme Weather". The teachers heard presentations on severe weather, cloud formation, weather forecast operations, river monitoring and forecasting, erosion, flooding, and hurricanes. Two field trips took the teachers to a SNOTEL gage and a river gage.



Teachers and NWS instructors on the banks of the Boise River where they learned about river gages



NOAA Weather Radios to Imperial Beach: As part of the process for the city of Imperial Beach, CA to become TsunamiReady, WFO San Diego WCM Ed Clark has worked with NWSH to obtain 300 NOAA Weather Radios. The radios will be used for public and government facilities, home schools, and elderly care centers.

Ed Clark is shown on the left helping to deliver the radios to Robert Stabenow, Lifeguard Captain, of the city of Imperial Beach.

Kid's Day, Spokane 2007: WFO Spokane participated in the KSPS Kid's Day Festival on August 11th in Riverfront Park, Spokane, WA. Pictured here (from left to right) are Laurie Nisbet (forecaster), Steve Bodnar (intern), and Carrie Bodnar. The event featured over 40 vendors that offered free activities for kids. The event attracted hundreds of families and kids from the area and surrounding towns. The booth featured multiple displays illustrating instruments used for weather observations, weather balloon flights, and significant weather events that occurred across the Inland Northwest. The booth also displayed educational pamphlets for hazardous weather events, careers in NOAA, and Owlie educational/coloring books for the kids. Craft tables were set up to the right of the booth (not pictured) where staff made wind streamers with the kids. Approximately 160 kids participated in the crafts that were offered and many visitors expressed appreciation of the NWS and activities that we provided.



WFO Los Angeles/Oxnard at the Coastal Discovery Center: The Coastal Discovery Center in San Simeon, CA, a satellite facility of NOAA's Monterey Bay National Marine Sanctuary, recently celebrated its one-year anniversary. The National Weather Service in Oxnard participated in the festivities, along with NOAA's National Ocean Service and National Marine Fisheries Service. Beachgoers, vacationers, and locals enjoyed music, ocean-themed activities, and toured the facilities. Visitors to the WFO Oxnard tent learned about NOAA Weather Radio, how clouds are formed, and got to play the ever-popular Weather Wheel Trivia Game.

Intern Jamie Meier and HMT Bonnie Bartling pose with Sammy the Salmon, one of NOAA's Marine Fisheries Mascots



HYDROLOGY AND CLIMATE SERVICES DIVISION

Graphical VTEC Editor for Riverpro Approved for AWIPS OB8.3: The Small Enhancement DR 19034 which adds the capability to Riverpro to allow the user to overwrite the application recommendations on the VTEC times by providing a simple graphical interface was approved for AWIPS OB8.3 by the AWIPS System Recommendation and Evaluation Committee (SREC) on July 30. Since the Office of Hydrologic Development (OHD) is doing the programming, the code enhancement might be ready to be implemented ahead of time via a maintenance release. Thanks to the feedback from various WR field offices this important enhancement became a high priority for WR to push to the national level. The graphical editor should substantially alleviate the problem of inaccurate H-VTEC coding appearing in flood warning products for river forecast points.



Display at Outdoor Retailers Show at the Salt Palace in Salt Lake City, UT.

Outdoor Retailers Show: The CBRFC (Salt Lake City, UT), NWRFC (Portland, OR) and SERFC (Peachtree City, GA) worked together to promote NWS hydrologic services at the Outdoor Retailers show in Salt Lake City August 9-12 2007. This annual event (largest of it's kind in the U.S.) brings in thousands of climbing, kayaking, canoeing, rafting and backpacking gear retailers from across the country. The three RFCs collaborated to design and staff a booth at this show to reach out to the recreation community and heighten awareness of RFC products and services. White water rafting and kayaking are very

popular in areas covered by the CBRFC, NWRFC and SERFC, which prompted these offices from different regions to join together on this unique outreach activity.

SCIENTIFIC SERVICES DIVISION

Upcoming Science Workshops

- **October 2-4 Great Divide Weather Workshop:** The Great Falls and Missoula offices are sponsoring the Eleventh Annual Great Divide Weather Workshop, October 2-4, 2007, in Great Falls, Montana. For more information see <http://www.wrh.noaa.gov/tfx/greatdivide.php>
- **October 13-18 NWA Annual Workshop: Reno, NV** Workshop information can be found at: <http://www.nwas.org/>

Activities

WR Gridded Verification Project: WR SSD (Ken Pomeroy and David Myrick) led the monthly September SOO/DOH GOTOMeeting call to review this summer's gridded forecast performance of temperature and dew point. The take-aways from the September call were:

- Bias Corrected (BC) GFS or BC Gridded MOS appears to be emerging a "best practice" as the data sets to use to initialize the gridded NDFD forecast for routine (non big event) meteorological situations. There are still local terrain issues to work out to make it easier for the forecasters to use.
- The forecaster should not use Bias Correction when they can clearly point to a significant meteorological reason to deviate. A major regime change such as a strong frontal passage in an example. The Tucson office documented a situation where the monsoon moisture was surging back and forth across their forecast area as a time when the forecaster should not use BC, and the forecaster can add value to the forecast.
- The forecaster can add value out to Day 7 in a few cases where he/she has a **good meteorological reason** for a **big departure** from guidance! The 7 day forecast examples from Spokane and Boise for the beginning of the heat wave provided an excellent example when the forecaster, using good science for a significant event, can make a substantial improvement over guidance.

For example, the max temperature verification turned out to be:

	Day 1 14-h	Day 3 62-h	Day 5 110-h	Day 7 158-h
%				

MOSGuideBC vs. MOSGuide	90	85	76	63
GFS40BC vs. GFS40	91	82	77	77
MOSGuideBC vs. Official	74	66	61	45
GFS40BC vs. Official	65	58	56	51

The following forecaster methodology was offered using verification to improve the forecast and/or reduce workload

- **Days 6-7: Get large scale trend correct!**
 - Nudge above/below guidance to capture synoptic scale trend
 - first hint big event/change coming, if identifiable, shift model forecast using broad strokes
- **Days 3-5: Edit/blend towards BC solution**
 - Only deviate from BC if forecaster can clearly identify regime change or need to tweak for high impact event
 - i.e., monsoon surge, strong frontal passage, etc
- **Days 1-3:**
 - (tranquil): Go with the BC grids (if they look reasonable, with no obvious problems)
 - Use extra time for outreach, training, focal point duties
 - (active): Add the important “details” to the forecast (human element for high impact or regime changes!)

The presentation contains a lot more information and explanation:

- The powerpoint slides from the call can be found at:
http://ww2.wrh.noaa.gov/ssd/digital_services/calls/september_call.ppt
- A shorter version of the recording (opening 22 minutes) can be found at:
http://ww2.wrh.noaa.gov/ssd/digital_services/calls/2007-09-13_short_SOO_Call.wmv
- A recording of the call on the digital services webpage:
http://ww2.wrh.noaa.gov/ssd/digital_services/calls/2007-09-13_SOO_Call.wmv

New Flash Flood Guidance Training Module: Greg Smith, Steve King, Eric Strem, and Kevin Werner have assembled an articulate module describing flash flood processes and guidance in the western US. This module is meant to augment the COMET flash flood process module (<http://www.meted.ucar.edu/hydro/basic/FlashFlood/>) developed as part of the basic

hydrology science course. WR will require this module as part of the training for WFO forecasters beginning October 1.

Status of ECMWF Data on the SBN : An additional suite of ECMWF data, ECMWF Hi-Res at 1.0 degree resolution, will become available with AWIPS OB8.1. Some time after this ECMWF Hi-Res data are received, the ECMWF 2.5 degree resolution data will be dropped from the AWIPS SBN. This ECMWF Hi-Res data will be useable/viewable in GFE and D-2D.

NOAA, the NWS, and the ECMWF have an agreement restricting the distribution of ECMWF products outside of NOAA/NWS. **Simply put, ECMWF graphics and data shall remain internal to NOAA/NWS operations and receive no wider distribution.** To support this, the ECMWF data are encrypted on the AWIPS SBN. No ECMWF products received by NOAA/NWS shall be ported to a NOAA/NWS web page, nor hard copied or electronically transferred for use outside a NOAA/NWS facility. This includes supplying ECMWF products to an emergency manager, local university, private research firm, or external customer, including other federal, state, and local government agencies. ECMWF products or graphics shall not be used in GoTo meetings, Webinar, or other types of on-line briefings, due to recording issues, unless such briefing is for internal NOAA/NWS use only. ECMWF products may be viewed by visitors to NOAA/NWS facilities and used by IMETs and other meteorologists/hydrologists during fire, emergency response, and other disaster related briefings. A special thanks to Mark Mollner (WR/SSD) for leading this effort!

RTMA and RUC: Dave Myrick, WRH/SSD, is working with Stan Benjamin to set up downscaled RUC feed for a select set of WR offices to evaluate better ways of handling mid-mountain data.

Teletraining Sessions for October: The teletraining calendar is now at: <http://rammb.cira.colostate.edu/visit/ecal.asp> Offices can register for the teletraining sessions by sending email to: visit@comet.ucar.edu.

- Cyclogenesis (Basic, Oct 4,9)
- Basic Satellite Principles(Basic, Oct 4,16)
- Satellite Interpretation of Orographic Clouds / Effects (Basic, Oct 2,10)
- Forecasting Convective Downburst Potential Using GOES Sounder Derived Products (Basic, Oct 17)
- MODIS Products in AWIPS (Basic, Oct 3,19)
- CRAS Forecast Imagery in AWIPS (Basic, Oct 24)
- Enhanced-V (Basic, Oct 15)
- Water Vapor Channel Satellite Imagery (Intermediate, Oct 11)

- Water Vapor Imagery and Potential Vorticity Analysis (Basic, Oct 31)

All previous sessions including those with recorded instructor audio and annotations are available at: <http://rammb.cira.colostate.edu/visit/ts.html>

SYSTEMS OPERATIONS DIVISION

Safety - Excellent Response to a Burning Bush and a Great Lesson for Everyone:

WFO Las Vegas had a salt cedar tree on their property catch on fire recently. A staff member remembered his safety training and responded appropriately to the fire. He called the fire department, grabbed a fire extinguisher, pointed it at the base of the flames and even recalled the "PASS" (Pull, Aim, Squeeze, Sweep) acronym taught at a station meeting last year. The fire extinguisher that was used to put out the fire was the specialized 13-lb Clean Guard, designed specifically to be effective for computer equipment, hazardous material conditions, etc. Replacement cost of the fire extinguisher was \$595 plus service charge. The cost was minimal considering the potential cost of a fire spreading to the building or harming people. In the end, the fire was put out, no one was injured, and no serious damage was done to the property.

Lessons learned:

1. An emergency CAN happen at any time, so everyone should make time to review your emergency procedures.
2. If a similar event occurs at your office (i.e., an outside fire not posing an immediate threat to people or expensive equipment or the building), call the Fire Department (as they did) and grab a fire extinguisher (as they did). If there is a fire in Operations or in the Equipment Room near computers, the Clean Guard fire extinguisher is exactly what you want to use because it is easy to clean up and is specifically designed to not harm the computer equipment. The dry chemical extinguishers will make a big mess and damage computer equipment.

Nice job by the folks in Las Vegas in immediately and effectively dealing with a potentially catastrophic situation. And thanks for the lessons learned that benefit all of us.

ADMINISTRATIVE MANAGEMENT DIVISION

Diversity Presentation by Dr. Steve Smith, the Chief of the Decision Assistance Branch of MDL: Weather Forecast Office Los Angeles/Oxnard and the Western Region Diversity Action Committee hosted a diversity presentation by Dr. Steve Smith, the Chief of the Decision Assistance Branch. The presentation entitled, "The Impact of Diversity and Cultural Factors on Tornado Warning Performance" was held by teleconference on Thursday, Sept. 20th, 2007. This presentation examined the role and impact of diversity and cultural factors on mission performance within the National Weather Service (NWS) forecast offices.

Personnel Selections

RACHEL TRIMARCO has been selected for the Forecaster position at the WFO in Pendleton, Oregon

JOSEPH HANNON has been selected for the NEXRAD ET position at the WFO in Portland, Oregon

MARK FAUCETTE has been selected for the Lead Forecaster position at the WFO in Reno, Nevada

JENNIFER BINGAMAN has been selected for the Forecaster position at the WFO in Sacramento, California

JOHN LHOTAK has been selected for the Hydrologist position at the CBRFC in Salt Lake City, Utah

KYLE LERMAN has been selected for the Forecaster position at the WFO in Eureka, California

DALLAS ROBERTSON has been selected for the NEXRAD ET position at the WFO in Great Falls, Montana

ROSALIN CIANFLOCCO has been selected for the Administrative Support Assistant at the WFO in Las Vegas, Nevada

WILLIAM PETERSON has been selected for the HMT position at the WFO in Hanford, California

JEFFREY KITSMILLER has been selected for the Forecaster position at the WFO in Missoula, Montana

MATTHEW HIRSCH has been selected for the Lead Forecaster position at the WFO in Phoenix, Arizona

DOROTHY STABLER has been selected for the Administrative Support Assistant at Western Region Headquarters, Scientific Services Division in Salt Lake City, Utah

ARIEL COHEN has been selected for the Forecaster position at the WFO in Great Falls, Montana

BECKY STRATTON has been selected for the Administrative Support Assistant at Western Region Headquarters, Systems Operation Division in Salt Lake City, Utah

STEN TJADEN has been selected for the ITO position at the WFO in Eureka, California

LARRY SMITH has been selected for the Forecaster position at the WFO in Monterey, California

TERRI MORAVITZ has been selected for the Administrative Support Assistant position at the CNRFC in Sacramento, California

MARK STACEY has been selected for the NEXRAD ET position at the WFO in Salt Lake City, Utah