



NOAA's NATIONAL WEATHER SERVICE

Western Region Notes

June 2, 2005

REGIONAL DIRECTOR'S OFFICE



*Vickie Nadolski, WR Director,
welcomes workshop participants.*

The second WR Climate Workshop was held May 24-26, 2005 in Kansas City, MO. The purpose of the workshop was to provide the Climate Services Focal Points with training on the new local Climate products being implemented in the WFOs over the next two years. WR, ER, CR, and SR all sent representatives to the workshop. WR is the only region to host this specialized training, since WR is the testbed region for these new local products. The WR workshop complimented the National Climate training program, which began in May 2005.

Dr. Holly Hartmann, from the University of Arizona, provided training on interpreting and communicating probabilistic Climate products. Other topics, besides the new Climate products, included the new Climate program xmACIS, current NCDC programs, and NERON (COOP Modernization).

Thanks to Andrea Bair and the WR Climate Services Steering Committee for organizing this workshop, and thanks to all who participated.

METEOROLOGICAL SERVICES DIVISION

Statement of the Week: This week's Statement of the Week is a heat advisory issued by WFO Seattle. The advisory was issued within one month of initiating a Heat Health Watch/Warning System for the Seattle area, which is tailored to the local climate. Temperatures in the area were expected to reach more than 20 degrees above normal. These conditions were noted in many regional and national news stories. Great work WFO Seattle!

URGENT - WEATHER MESSAGE
NATIONAL WEATHER SERVICE SEATTLE WA
402 AM PDT FRI MAY 27 2005

WAZ006>008-271915-
/X.NEW.KSEW.HT.Y.0001.050527T1900Z-050528T0100Z/
EVERETT AND VICINITY-SEATTLE METROPOLITAN AREA-TACOMA AREA-
INCLUDING THE CITIES OF...EVERETT...EDMONDS...LYNNWOOD...

MARYSVILLE...ARLINGTON...SEATTLE...BELLEVUE...FEDERAL WAY...
 KENT...RENTON...TACOMA...LAKEWOOD...PUYALLUP...SUMNER
 402 AM PDT FRI MAY 27 2005

...HEAT ADVISORY IN EFFECT FROM NOON TODAY TO 6 PM PDT THIS
 EVENING...

THE NATIONAL WEATHER SERVICE IN SEATTLE HAS ISSUED A HEAT
 ADVISORY... IN EFFECT FROM NOON TODAY TO 6 PM PDT THIS EVENING.

TEMPERATURES WILL CLIMB INTO THE UPPER 80S AND LOWER 90S TODAY IN
 PARTS OF THE EVERETT-SEATTLE-TACOMA URBAN CORRIDOR... MORE THAN
 20 DEGREES ABOVE NORMAL FOR LATE MAY. EXCESSIVE PHYSICAL ACTIVITY
 IN HEAT THIS INTENSE CAN BE DANGEROUS. THE ELDERLY... VERY YOUNG...
 SICK... AND PERSONS WITH HEART CONDITIONS ARE MOST AT RISK.

A HEAT ADVISORY MEANS THAT A PERIOD OF HOT TEMPERATURES WILL
 CREATE A SITUATION IN WHICH HEAT ILLNESSES ARE POSSIBLE. DRINK
 PLENTY OF FLUIDS...STAY IN AN AIR-CONDITIONED ROOM...STAY OUT OF THE
 SUN...AND CHECK UP ON RELATIVES AND NEIGHBORS.

\$\$

San Diego County Wildland Fire Training Exercise: WFO San Diego participated in the third annual San Diego County Inter-Agency Wildland Fire Training Exercise at Lake Hodges County Park in Escondido, California on May 23, 24, and 27, 2005. The office provided test Spot Fire Weather forecasts for the exercise. In addition, Rob Balfour (IMET) gave a crew briefing, a planning briefing, and demonstrated the Advanced Meteorological Response System (AMRS) on May 27. Other agencies participating included city, rural, and Indian reservation Fire Departments, Emergency Medical Services, San Diego County Sheriff's Department, California Highway Patrol, California Division of Forestry, U.S. Forest Service, Bureau of Land Management, Bureau of Indian Affairs, National Park Service, American Red Cross, and Radio Amateur Civil Emergency Services (RACES). Great job WFO San Diego!



Forecaster Exchange With U.S. Navy at San Diego: WFO San Diego participated in a forecaster exchange program with the North Island Naval Air Station in May. Pictured here, Mark Moede (lead forecaster) demonstrates some of the capabilities of AWIPS and the Grid Forecast Editor (GFE) to Nadine Nagamatsu, Aerographer's Mate Second Class.

Appreciation for Seattle’s Support to Disaster Exercise: WFO Seattle’s Warning Coordination Meteorologist, Ted Buehner, recently received kudos for coordinating the office’s support-a-disaster exercise known as “CASCADE FURY III.” He participated in a series of mock newscasts, adding realism to the exercise. He also provided a tour of the WFO, tailored specifically for the exercise scenario, to over 180 emergency responders and transportation professionals. According to Dolph Diemont, Regional Emergency Transportation Representative for U.S. Dept. of Transportation Region 10: “This year’s exercise was the best thus far...we successfully brought together for the first time, city, county, state, and federal emergency management personnel in one exercise and tested the ability of all organizations to provide emergency during a catastrophic natural disaster event.” Great work, Ted!

WFO Great Falls IMET Supports Engine Academy: On May 13-15, WFO Great Falls Incident Meteorologist, Bob Hoenisch, participated in the Central Montana Engine Academy. The Engine Academy is a cadre of local, state, federal, and volunteer fire departments who train to fight wildfires. Bob’s role was to provide weather support for the exercise, just as he would during a true wildfire IMET dispatch. As part of the training, he set up the All-Hazards Meteorological Response System (AMRS) in rural Cascade County, Montana. Because the Engine Academy was trying to evaluate individuals who may have had little knowledge of wildfire behavior, their interest in weather was a bit unusual. They wanted weather “conducive to burning,” so they could sustain grass fires on which to conduct their training. In this case, rain showers in the forecast were met with less enthusiasm than would be the case during an actual wildfire.



WFO Elko Senior Forecaster Larry Whitworth discusses NOAA Career Opportunities at the Duck River Valley Nation Owyhee Career Fair

Elko Outreach Efforts: NWS Elko has been actively pursuing outreach opportunities since the formation of a special office outreach team earlier this year.

WFO Elko recently traveled to the Native Duck River Valley Nation town of Owyhee for a Career Fair. Their display outlined opportunities in atmospheric science careers, as well as information on NWS products and services.

Elko has also been focusing on communication with various charitable organizations in the area, including demonstrations on web-based NWS products to the Elko Shriner’s and Rotary Clubs.

The outreach team also participated in Great Basin College’s Career fair, where students were offered a variety of information related to NOAA/NWS careers.



(L to R) Capt. Bud Clark, Senator Frank Smith, John Daggett, Curt Smith, and Tanja Fransen stand around the new geodetic survey marker at the Milk River Observation Point

NWS Glasgow and the 200th Anniversary of

Lewis and Clark: WFO Glasgow has had some fun opportunities for outreach during the activities of the 200th Anniversary of Lewis and Clark and the Corps of Discovery in northeastern Montana.

Warning Coordination Meteorologist Tanja Fransen gave presentations on the weather that the Corps encountered when they traveled through Montana. The presentations were provided at the Milk River Lewis and Clark Festival in Nashua, and again at the Two Rivers Lewis and Clark Festival in Glasgow, which included the National Park Service Corp II traveling exhibit.

On May 8, WFO Glasgow partnered with NOAA's National Geodetic Survey to dedicate a survey marker at the Milk River Observation site above Fort Peck Dam. The Lewis and Clark Peace Medal geodetic survey marker will become a part of the National Spatial Reference System (NSRS), the federal standard and foundation for all positioning and navigation activities in the United States. The dedication included remarks by State Senator Frank Smith and John Daggett from the U.S. Army Corps of Engineers. A reading of the Lewis and Clark journals from May 8, 1805 was provided by Bud Clark. Mr. Clark is the great-great-great grandson of William Clark, and has been traveling the Lewis and Clark trail with the Discovery Expedition of St. Charles.



Members from the Discovery Expedition of St. Charles, along with staff & family from WFO Glasgow, huddle around a campfire.

The staff at WFO Glasgow also had the opportunity to provide a chili feed one evening for the Discovery Expedition of St. Charles. This re-enactment group has been following the historic Lewis and Clark trail and has spent the last two years along the Ohio River as well as on the lower portions of the Missouri River. Staff members from WFO Glasgow spent the evening at the camp learning about the group, the characters they portray, and the interesting things they have encountered so far. The Discovery Expedition of St. Charles has a web site where they log all of their photos and journal entries. It can be viewed at: <http://www.lewisandclark.net/>

Job Service Workforce Tours Glasgow Office: The 2005 Montana Job Service Employer Committee (JSEC) and Job Service Manager's Annual Conference was recently held in Glasgow, Montana. Glasgow's SOO, Tom Salem, a member of the local JSEC committee, coordinated an afternoon tour of the NWS Glasgow office for 55

attendees. The attendees were split into two groups, with Tom Salem providing a tour of the outside facilities (including a briefing about the radar) and Tanja Fransen (WCM) hosting the group in the operations area inside. The tour concluded with the group observing the afternoon upper air balloon launch.

The JSEC members are local employers who provide recommendations for the Job Service Workforce Centers across Montana. They also provide training for area businesses and employees on customer service, legal issues, diversity and many other business activities. WFO Glasgow staff members have participated in much of the training provided by the local JSEC.

Western Governor's Association Fire Weather Association Resolution Proposed:

In 2004, the Western Governor's Association (WGA) received a grant from NOAA to study the feasibility of establishing a Fire Weather Center at the National Interagency Fire Weather Center in Boise, Idaho. An interagency team, including Bruce Bauck and Roger Lamoni from Western Region, met several times over the last year to study this issue. Under the leadership of Shaun McGrath from the WGA, the team recently completed a draft resolution that will be presented at the next WGA meeting to be held in mid-June in Breckenridge, Colorado. More details of the resolution will be available pending final approval by the governors at the June meeting.



NOAA judges at the 2005 ISEF included: Gary Zell (WFO Tucson), Doug Green (WFO Phoenix), Dr. David Divins (NOAA National Geophysical Data Center), Valerie Meyers (WFO Phoenix), and Tony Haffer (WFO Phoenix).

NC, won the NOAA award, a 10-week paid summer internship at NOAA's Environmental Technology Laboratory (ETL) in Boulder, Colorado, for his research project, entitled: "Global Warming: The Effects of Increased Temperature and Carbon Dioxide". Ryan also received a certificate signed by the Under Secretary of Commerce for Oceans and Atmosphere and a NOAA Administrator.

WFOs Phoenix and Tucson Participate in ISEF:

On May 8-14, WFOs Phoenix and Tucson participated in the Intel International Science and Engineering Fair (ISEF) in Phoenix, AZ. MIC Tony Haffer, SOO Doug Green, and forecaster Valerie Meyers (WFO Phoenix) and forecaster Gary Zell (WFO Tucson) were privileged to serve as judges. ISEF is the world's largest pre-college celebration of science. Over 1300 high school students from 40 nations competed for scholarships, tuition grants, scientific field trips, and other prizes.

For the first time, NOAA sponsored an ISEF award, "The Pulse of the Planet", for the student whose project best related to NOAA's mission goals. Mr. Ryan Neely, a senior at the North Carolina School of Science and Math in Durham,



ESA Rod Theis shows PDT's media partners the RDA building.

held in the spring of 2007.

Media Day at WFO Pendleton: WFO Pendleton recently held a media day. Media partners from Yakima, the Tri Cities, and Pendleton attended a three-hour workshop that included a tour of the office and the WSR-88D radome. AWIPS and GFE demonstrations were provided, in addition to a comprehensive overview of the WFO's webpage with emphasis on the NDFD and PDT's prototype products. The workshop concluded with a brainstorming session on how the office and the media could work together to provide the citizens of northeast Oregon and southeast Washington with the best possible service. Another workshop will be



Aviation Weather Seminars: WFO Seattle hosted two aviation weather seminars for the area's Civil Air Patrol on May 9 and 23 at their NOAA facility in Seattle.

The two sessions, attended by about 50 pilots, addressed self briefings using the Internet (before a formal pilot weather briefing) and interpreting weather from the cockpit. Each session was taught by Washington Aviation Liaison Officer and Lead Forecaster Allen Kam. WCM Ted Buehner led an

office tour each evening as well. The Civil Air Patrol attendees noted the training gave them a much greater understanding of aviation weather, how we produce aviation weather products, and how to obtain and use it in their air support role.

HYDROLOGY AND CLIMATE SERVICES DIVISION

Debris Flow Warning System: The NWS and the USGS are collaborating on a debris flow warning system, which includes a demonstration project for burn areas in WFO Oxnard and San Diego's CWAs and a research component (which involves NOAA ETL and the USGS). A meeting was held on May 16 at the CNRFC with WFO San Diego, WFO Oxnard, the CNRFC, and the USGS to discuss implementation details for the demonstration project. The USGS will provide precipitation thresholds to the two southern California WFOs. These thresholds will indicate whether debris flows can be expected over recently burned areas or not. The WFOs will include statements about the threat of debris flows in their flash flood watches and warnings when appropriate. This demonstration project will be implemented at WFO Oxnard and San Diego this fall. In the future, depending on funding, the project may be enhanced based on recommendations from the research side of this project, as well as expanded to other areas of the country.

SCIENTIFIC SERVICES DIVISION

Next Generation Satellites (GOES-N) Nearing Launch Date: The current series of Geostationary Operational Environmental Satellites (GOES-8 through 12) are aging and will be soon replaced. GOES 10 is the operational western satellite and GOES-12 is the eastern satellite. The next generation GOES satellites are called GOES N, O, and P. GOES-N is tentatively scheduled to be launched June 23, 2005. As with most rocket launches, there may be some slip in the launch schedule. Once in orbit, the satellite will undergo a lengthy check out and testing phase. The checkout process will last most of the summer and conclude by late August. GOES-N will be assigned a number at that time (GOES-13). After successful post-launch checkout at 90W longitude, the satellite will be placed in an on-orbit storage mode so that it can rapidly replace a failure of either GOES 10 or 12.

Summary of changes:

Imager - Several evolutionary technical improvements have been incorporated to GOES-N.

- *Better image navigation:* An advanced attitude control system provides improved instrument pointing performance which results in better image navigation and registration. The image location accuracy should improve to approximately two kilometers. The imagery will look a little sharper at full resolution and have improved earth location navigation (reduced shifting) during animation.
- *Slight changes to image types and resolution:* The changes to available imagery will vary depending on which satellite you are currently using. For GOES-10 (western satellite) users, a 13.3 micron channel will replace the 12 micron channel. This will affect some of the volcanic ash algorithms. The water vapor resolution will improve to 4km. For GOES-12 (eastern satellite) there will be no changes in imager or sounder resolutions from GOES-12.
- *Reduced schedule outages:* Thermal shields were added to the secondary mirror structure to eliminate operational keep out zones and allow operations during eclipse periods. This means most of the scheduled early morning data outages will be eliminated during the twice per year eclipse season.
- *Better Infrared Image Calibration:* Cooler operational set points for the infrared detectors allow clearer view of and improved thermal radiation to space, which should allow for better image calibration.
- *Better Cross Calibration of Sensors:* Some of the image sensors are really composed of a group of 8 sensors which scan systematically back and forth

across the earth as a single entity. Minor calibration differences between these sensors result in striping within the scan lines of the image. Imager blackbody dwell time has been increased from 0.2 to 2 seconds which should help reduce image striping.

Sounder - The Sounder has similar evolutionary improvements to the Imager.

Solar X-ray Imager and Space Environment Monitor - The Solar X-ray Imager monitors the sun. The Space Environment Monitor instrument package consists of in-situ measurements of the magnetic and particle environments as well as remote measurement of the integrated X-ray emission and the extreme ultraviolet (EUV) spectra of the Sun. For examples of use, please go to the NOAA Space Environment Center (SEC) web site at: <http://sec.noaa.gov/>. The COMET space weather training module can be found at: <http://meted.ucar.edu/spaceweather/intro/>.

New COMET Jet Streak Web Module: COMET has released a new Webcast on Jet Streak Circulations. It can be found at: <http://meted.ucar.edu/norlat/jetstreaks/>

This Webcast is a presentation given by Dr. James T. Moore of Saint Louis University. Dr. Moore reviews many aspects of jet streak dynamics including convergence/divergence, vertical motion fields, ageostrophic winds, propagation, and coupled jets. The Webcast is 41 minutes in length and includes a quiz.

Advanced Warning Operations Course (AWOC): It is important that offices keep up with the training schedule. In WR, we have broken the two track deadlines up into first and second half of FY05. Completion will be tracked by LMS and reported in the WR Professional Development and Training plan.

March 31, 2005: Complete Core Track (WFO and CWSUs)
August 31, 2005: Complete Severe Weather Track (WFOs and highly recommended for CWSUs)
TBD (probably March, 2006): Winter Weather Track (WFOs)

AWOC IC Completions by WFO (as of May 27, 2005)

There are 6 ICs in the Core Track and 5 ICs in the Severe Track

Region	WFO ID	Description	IC Completions
WR	PQR	PORTLAND WFO OREGON	180
WR	TFX	GREAT FALLS WFO MONTANA	177
WR	MSO	MISSOULA WFO MONTANA	170

Region	WFO ID	Description	IC Completions
WR	OTX	SPOKANE WFO WASHINGTON	162
WR	BOI	BOISE WFO IDAHO	157
WR	LOX	LOS ANGELES WFO (OXNARD) CALIFORNIA	156
WR	EKA	EUREKA WFO CALIFORNIA	153
WR	FGZ	FLAGSTAFF WFO ARIZONA	151
WR	MTR	SAN FRANCISCO BAY AREA WFO (MONTEREY) CA	151
WR	TWC	TUCSON WFO ARIZONA	150
WR	BYZ	BILLINGS WFO MONTANA	149
WR	VEF	LAS VEGAS WFO NEVADA	144
WR	MFR	MEDFORD WFO OREGON	142
WR	PDT	PENDLETON WFO OREGON	142
WR	PIH	POCATELLO WFO IDAHO	140
WR	SEW	SEATTLE WFO WASHINGTON	139
WR	HNX	SAN JOAQUIN VALLEY WFO (HANFORD)CALIFORNIA	136
WR	PSR	PHOENIX WFO ARIZONA	126
WR	REV	RENO WFO NEVADA	126
WR	SGX	SAN DIEGO WFO CALIFORNIA	125
WR	GGW	GLASGOW WFO MONTANA	123
WR	LKN	ELKO WFO NEVADA	123
WR	STO	SACRAMENTO WFO CALIFORNIA	115
WR	SLC	SALT LAKE CITY WFO UTAH	109
WR	ZSE	AUBURN CWSU WASHINGTON	26
WR	RSA	CALIFORNIA-NEVADA RFC (SACRAMENTO) CA	23
WR	ZOA	FREMONT CWSU CALIFORNIA	19
WR	ZLC	SALT LAKE CITY CWSU UTAH	16
WR	ZLA	PALMDALE CWSU CALIFORNIA	14
WR	PTR	NORTHWEST RFC (PORTLAND) OREGON	6
WR	SLR	COLORADO BASIN RFC (SALT LAKE CITY) UTAH	6
Total IC Completions for Western Region			3556
Total IC Completions for NWS			17099

For more info on AWOC and LMS go to; <http://wdtb.noaa.gov/courses/awoc/index.html>.

SYSTEMS OPERATIONS DIVISION



Road Work: While on route to Reno, Grant Garner stopped in Elko to survey the road damage to the WSR-88D. The road was damaged due to the flooding in the area. While documenting the damage, a section of the road was encountered that was totally impassable. Grant rented a bulldozer and immediately began rebuilding the road and stopping the water that was flowing over parts of the road.

ASOS Site Visit: On May 26, Scott Birch (ASOS Program Manager) and Kevin Bolton (ASOS RMS) took a site survey visit to Snoqualmie Pass and North Bend, Washington. They had several meetings with interested parties for the relocation of two Automated Surface Observation Systems. The trip was very informative and two sites have been selected for the ASOS relocations.

SOD IT Projects: SOD IT staff have been working on several regional IT projects that are near ready to go operational. A RedHat proxy server is now installed at WRH and being tested against the NWS satellite server. All RedHat enterprise systems in the region will be able to get updates from the proxy. The new iPlanet-based mail server is being tested at WRH. The plan is to begin migrating WRH email accounts to the new system this week, then migrate field accounts according to a site by site schedule to be coordinated soon. A new NFS server for the web farm has been set up and a subset of services is being tested. This new server, when put into production, will provide a redundant highly fault tolerant service for a significant portion of web farm content. A configuration for the new WRH-provided WFO data servers is in final draft. A regional mod note is expected to be issued next week.

AWIPS Work: Sean Wink, Electronics and Facilities Branch Chief, assisted the Las Vegas Weather Forecast Office with their AWIPS DX installation. Sean and Joe Lachacz, Electronics Program Manager, will install AWIPS Build 5 at the Regional Office beginning June 1.