



NOAA's NATIONAL WEATHER SERVICE Western Region Notes

January 15, 2008

REGION DIRECTOR'S OFFICE

The End of an Era! After 38½ years of dedicated government service Rich Douglas, Chief of the Western Region Meteorological Services Division retired on January 3, 2008. Rich started his career as a Weather Officer in the US Air Force before joining the National Weather Service. With the NWS he was a Hydrometeorological Technician, Meteorologist Intern, Journey Forecaster, Lead Forecaster, Deputy Chief of MSD and finally Chief of MSD. His passion for weather and commitment to customer service will not be soon forgotten.



METEOROLOGICAL SERVICES DIVISION

Excellent Preparedness Statement from WFO Reno

In advance of last week's major winter storm that impacted much of the Western Region, WFO Reno issued a series of Public Information Statements to help people in and traveling through the Sierras prepare for the magnitude of the storm. WCM Rhett Milne came up with the idea to send a reminder based on information from previous Winter Weather Awareness weeks, and the statement was issued by HMT Scott Mcguire and SOO Chris Smallcomb. It was sent directly to all local Emergency Managers, and was published by the Reno Gazette-Journal under the title "National Weather Service Preparedness Tips", as well as used in other articles.

The storm was as strong as forecast, with up to 11 feet of snow in the Sierras and wind gusts above 150 mph on the Sierra crest and 80 mph in the lower elevations. Despite the severity of the storm, road closures, and power outages, there were no deaths and relatively few injuries in the area. The PNS was a great summary of home and travel preparedness measures, information on what to do if one becomes stranded, and helpful phone and website information.

PUBLIC INFORMATION STATEMENT
NATIONAL WEATHER SERVICE RENO NV
130 PM PST THU JAN 3 2008

...MAJOR WINTER STORM TO AFFECT THE REGION THROUGH THE WEEKEND...

...MAKE PREPARATIONS BEFORE THE STORM ARRIVES BY ENSURING YOU
HAVE ENOUGH FOOD AND WATER TO LAST SEVERAL DAYS...

A SERIES OF STORMS ARE FORECAST TO MOVE INTO THE SIERRA TONIGHT
THROUGH SUNDAY WITH THE STRONGEST STORM FRIDAY INTO EARLY
SATURDAY. THE STORM ON FRIDAY INTO SATURDAY WILL HAVE A MAJOR IMPACT
ON TRAVEL IN THE REGION AND ACROSS SIERRA PASSES CAUSING MAJOR
TRAVEL DISRUPTIONS. DO NOT ATTEMPT TO TRAVEL IN THE SIERRA!

IN THE MOUNTAINS...MAJOR WINTER STORMS CAN DROP SEVERAL FEET OF SNOW
IN A SHORT PERIOD OF TIME...CAUSING ROADS OVER MOUNTAIN PASSES TO
CLOSE AND STRAND TRAVELERS. THE WORST CONDITIONS ARE WHEN STRONG
WINDS ACCOMPANY HEAVY SNOW...CREATING WHITEOUT CONDITIONS THAT THAT
CAN BE DEADLY FOR ANYONE VENTURING OUTDOORS.

...HOME PREPAREDNESS...

WHEN A WINTER STORM HITS...USE COMMON SENSE AND DO NOT VENTURE OUT
IN THE STORM UNLESS IT IS ABSOLUTELY NECESSARY. IF YOU MUST GO
OUT...DRESS WARMLY WITH MULTIPLE LAYERS OF CLOTHES...ESPECIALLY OVER
YOUR HANDS...FEET...AND FACE. BE SURE TO HAVE THE FOLLOWING ITEMS
AVAILABLE:

- * FLASHLIGHT AND EXTRA BATTERIES
- * BATTERY POWERED NOAA WEATHER RADIO OR AM/FM PORTABLE RADIO
- * EXTRA FOOD AND WATER
- * EXTRA MEDICATION AND BABY SUPPLIES
- * FIRST-AID KIT
- * HEATING FUEL
- * EMERGENCY HEATING SOURCE
- * FIRE EXTINGUISHER AND SMOKE DETECTOR
- * CARBON MONOXIDE DETECTOR (300 PEOPLE DIE IN THE U.S. EACH
YEAR DUE TO CARBON MONOXIDE POISING)
- * IF YOU ARE USING A PORTABLE GENERATOR MAKE SURE YOU HAVE
SUFFICIENT EXHAUST METHODS IN PLACE TO PREVENT CARBON
MONOXIDE POISING.

...TRAVEL PREPAREDNESS...

WINTER WEATHER HAZARDS THROUGHOUT THE REGION RESULT IN THOUSANDS OF
MOTOR VEHICLE ACCIDENTS EACH YEAR. SADLY...MANY OF THESE ACCIDENTS
CAN BE AVOIDED IF TRAVELERS WOULD USE COMMON SENSE BY SLOWING DOWN
AND ALLOWING EXTRA TRAVEL TIME...OR SIMPLY NOT TRAVELING AT ALL
UNLESS IT IS AN ABSOLUTE EMERGENCY.

IF YOU MUST TRAVEL:

- * STORE EMERGENCY SUPPLIES IN YOUR CAR SUCH AS BLANKETS...AN EXTRA
CHANGE OF DRY CLOTHES...WINTER GEAR...A FLASHLIGHT...HIGH-ENERGY
SNACKS OR OTHER FOOD...WATER...AND CLAY CAT LITTER FOR TRACTION.

- * CARRY A CELL PHONE OR TWO-WAY RADIO...AND KEEP THE BATTERY CHARGED. THIS WILL ALLOW YOU TO CALL FOR HELP IF YOU DO GET STRANDED.
- * KEEP AN ICE SCRAPER AND SNOW BRUSH IN YOUR CAR FOR ICE AND SNOW REMOVAL.
- * KEEP THE GAS TANK FULL FOR EMERGENCIES AND TO KEEP THE FUEL LINE FROM FREEZING.
- * ALWAYS CHECK THE NATIONAL WEATHER SERVICE OR LOCAL MEDIA PRIOR TO TRAVEL TO AVOID BEING CAUGHT IN DANGEROUS WEATHER. CHECK WITH STATES DEPARTMENTS OF TRANSPORTATION FOR ROAD CONDITIONS BEFORE LEAVING.
- * PASS ALONG YOUR TRAVEL ITINERARY TO SOMEONE ELSE. THEREFORE...IF YOU DO GET STRANDED...THEY WILL KNOW WHERE TO ALERT AUTHORITIES.
- * ALLOW A SIGNIFICANT AMOUNT OF EXTRA TIME FOR TRAVEL. EXPECT DELAYS AND ROAD CLOSURES OR DETOURS.

IF YOU ARE CAUGHT IN A WINTER STORM AND BECOME STRANDED:

- * WAIT FOR HELP! STAY WITH YOUR VEHICLE...UNLESS HELP IS CLEARLY VISIBLE NEARBY. DISORIENTATION AND CONFUSION COME QUICKLY IN COLD AND SNOWY WEATHER. IT IS EASY TO GET LOST!
- * DISPLAY A SIGN OF TROUBLE TO LET PEOPLE KNOW YOU NEED HELP. SIGNAL RESCUERS WITH YOUR INTERIOR LIGHT AT NIGHT OR A BRIGHT CLOTH ON YOUR CAR DURING THE DAY.
- * OCCASIONALLY RUN THE ENGINE TO KEEP IT WARM. REMEMBER TO KEEP THE EXHAUST PIPE CLEAR OF SNOW TO PREVENT DEADLY CARBON MONOXIDE FUMES FROM ENTERING THE CAR.
- * DO MINOR EXERCISES TO KEEP UP CIRCULATION.
- * IF MORE THAN ONE PERSON IS IN THE CAR...TAKE TURNS SLEEPING. SLEEPINESS CAN BE A SIGN OF HYPOTHERMIA...AND IF YOU ARE NOT AWAKENED PERIODICALLY TO INCREASE BODY TEMPERATURE...YOU CAN FREEZE TO DEATH! HUDDLE TOGETHER FOR WARMTH.
- * LAYER CLOTHING TO TRAP BODY HEAT IN ORDER TO KEEP WARM.
- * KEEP A WINDOW THAT IS AWAY FROM THE BLOWING WIND SLIGHTLY OPEN TO LET FRESH AIR IN.

...FOR ADDITIONAL TRAVEL INFORMATION...

HERE ARE THE DEPARTMENTS OF TRANSPORTATION PHONE AND WEBSITE INFORMATION...ALONG WITH FLIGHT INFORMATION FOR THE RENO-TAHOE INTERNATIONAL AIRPORT:

NEVADA...

PHONE...511 (IN STATE)
877-687-6237 (OUT OF STATE)
WEB...SAFETRAVELUSA.COM/NV/ *(official NV DOT site)*

CALIFORNIA...

PHONE...511 (IN STATE)
800-427-7623 (OUT OF STATE)
WEB...WWW.DOT.CA.GOV

RENO AIRPORT...

WEB...WWW.RENOAIRPORT.COM *(official airport information site)*

WWW.FLY.FAA.GOV

...HEALTH/AGRICULTURAL IMPACTS...

PROLONGED EXPOSURE TO THE COLD TEMPERATURES AND OVER-EXERTION CAN BE LIFE THREATENING. COLD WEATHER ALONE CAN PUT AN EXTRA STRAIN ON THE HEART AND LEAD TO HYPOTHERMIA. HEAVY EXERTION...LIKE SHOVELING SNOW...PUSHING A CAR OR WALKING IN DEEP SNOW...INCREASES THE CHANCE FOR A HEART ATTACK OR STROKE.

COLD WEATHER ALSO SPELLS EXTRA HARDSHIP FOR PETS AND LIVESTOCK WHO CAN SUFFER FROM FROSTBITE...EXPOSURE...AND DEHYDRATION. IN FACT...MOST ANIMAL DEATHS IN WINTER STORMS RESULT FROM DEHYDRATION DUE TO THE FREEZING OF WATER SOURCES. FINALLY BE SURE TO CHECK ON ELDERLY OR DISABLED FRIENDS...FAMILY...OR NEIGHBORS TO ENSURE THEY ARE PREPARED FOR WINTER STORMS OR ARE MOVED TO A SAFE LOCATION BEFORE IT HITS.

...FINAL WORDS OF ADVICE...

STATE AND LOCAL EMERGENCY MANAGERS ARE WORKING WITH THE NATIONAL WEATHER SERVICE AND ARE IN THE PROCESS OF PREPARING FOR EMERGENCY RESPONSE...SHOULD IT BECOME NECESSARY. CITIZENS CAN ASSIST IN THIS EFFORT BY STAYING INFORMED ON THE LATEST FORECASTS FROM THE NATIONAL WEATHER SERVICE. FOR THE LATEST WEATHER FORECASTS...VISIT THE NATIONAL WEATHER SERVICE AT WWW.WEATHER.GOV/RENO OR LISTEN TO NOAA WEATHER RADIO OR LOCAL MEDIA FOR UPDATED WEATHER INFORMATION OR CONDITIONS.

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MCGUIRE/SMALLCOMB

Samoa, California TsunamiReady® Ceremony:

Located on the Northern Coast of California the city of Samoa was recognized as the nation's 50th TsunamiReady Community on Dec. 20, 2007.

Enormous success came from the innovative approach taken to educate the community. Partnering with AmeriCorps the city launched a door-to-door education campaign. This major effort focused on educating and preparing community members for a quick response to a tsunami. In addition evacuation routes and a local warning plan were established. In an unprecedented event, Samoa conducted California's first tsunami evacuation drill that included 90 percent of the community.



Top, l-r: Royal McCarthy (CalTrans), Mary Beth Wolford (Samoa School superintendent); Bottom, l-r: Dan Johnson (community leader), Troy Nicholini (WFO Eureka, WCM)

SCIENTIFIC SERVICES DIVISION

Upcoming Science Workshops

- **January 20-24 -- AMS Annual Conference:** The [AMS Annual Meeting](#) will be held on 20-24 January 2008 in New Orleans, LA. Conference information can be found at: <http://www.ametsoc.org/meet/annual/>

Activities

WR QPF/PoP High Impact Forecast Verification Page: SSD has created a new web page in an effort to make it possible for offices to review their gridded forecasting performance for high-impact precipitation events. The focus is not on the traditional QPF-QPE point verification. Rather, given all of the uncertainty and variability associated with producing a perfect QPE across the west, the focus is on how the forecast performed for significant or high impact events. Did the forecast send the right message to the public and capture the magnitude of the event? Through the use of the WR POP/QPF Verification page, forecasters can:

- view "event" images which indicate which areas of the region were affected by climatologically significant precipitation for each 6-hour period since the beginning of December (do the forecasts capture the more significant events?).
- see graphically how their gridded QPF forecast compares to the QPE analysis provided by the RFCs can broken out into precipitation categories. (did the forecast correctly denote areas of heavier precipitation?)
- view statistics on their office's forecast accuracy for all lead times out to 7 days prior to the event.
- see graphically how the POP forecast for various rainfall thresholds varied during the forecast period (did the forecast probabilities trend in the right direction?).
- compare forecast with model data that forecaster used to make their meteorological decisions (currently available: ECMWF, GFS and NAM. coming soon: SREF!) (how well did the model forecasts capture the event?)

In addition, enhancements scheduled for release in the coming weeks include the ability to aggregate statistics over user-selectable periods. This will be useful for examining the accuracy of forecasts over the length of a storm, instead of just a 6-hour period. Also, the ability to compare the forecast PoP and QPF to local climatology will be available soon as well.

The real-time web page located on the AWIPS network -- the address is <http://165.92.200.49:8080>.

AWIPS2.0 Java Training: Mark Mollner is working with Matt Williamson (ITO-Pocatello) and David Pike (ITO-Reno) to set up a series of Java and Java Script GOTOMeeting training sessions to prepare for AWIPS 2.0. An announcement will be coming out soon.

New BOIVerify, version 2.0 training module available: A new training module has been posted on the digital services page that describes the new features of BOIVerify version 2.0:

http://ww2.wrh.noaa.gov/ssd/digital_services/training/BOIVerify2/

Specifically, the module explains:

- How to use the new buttons/tabs/features on the BOIVerify GUI.
- How to create and interpret Value Histograms (under the Distributions Tab).
- How to create and interpret Expected Value Plots (under the Distributions Tab)

Most of this training was drawn from Tim Barker's user documentation on BOIVerify. Dave Myrick generated the training module.

Winter Storm Reconnaissance Program, 2008: The WSR08 program is expected to start on January 17, 2008. Approximately 140 flight hours (18-20 missions) will be available on the ONR P-3 plane through March 15. In addition, flight hours will be available with one USAF C130 plane from January 17 through March 10. The C130 will be based in Honolulu while the P-3 will be based in Portland, OR. The planes will take dropsonde observations in areas identified by the NCEP SDM as the most relevant for improving the forecasts for events requested by the field and NCEP forecasters. The procedure will be very similar to last year. If there is considerable model uncertainty associated with a storm moving across the eastern Pacific, the office can contact the Monterey WFO and request that a flight is sent out to drop additional dropsondes. More instructions will be coming soon.

Basic Hydrologic Science Training Progress Report: The Basic Hydrologic Science Course has seven base modules and two local choice modules determined by each WFO. The new completion date for this course is March 3, 2008. A reminder that this course (the nine modules) are to be completed by every WR Meteorologist, Hydrologist, Operational Shift Worker, HMT, and Physical Scientist. Below is a snapshot of each office's progress (percent complete) as of January 7, 2008.

	Runoff Processes	Unit Hydrograph Theory	Streamflow Routing	Flash Flood Processes	Flash Flood Cases	Flash Flood Guidance	Debris Flow Primer
BYZ	89%	89%	83%	78%	78%	78%	72%
BOI	90	75	55	60	60	50	45
LKN	65	65	65	65	65	65	65
EKA	94	94	89	78	78	61	44
FGZ	50	50	50	44	44	50	44
GGW	94	94	88	94	88	76	71
TFX	74	68	74	58	58	53	63
VEF	76	76	71	71	71	76	76
LOX	100	95	86	86	76	95	95
MFR	75	65	50	25	25	0	0
MSO	60	55	50	55	55	50	55
PDT	65	60	65	60	60	55	55
PSR	44	33	28	39	39	39	39
PIH	89	83	78	83	61	39	56

PQR	64	64	59	55	50	41	45
REV	83	67	61	67	61	56	50
STO	67	57	38	33	19	29	19
SLC	70	65	55	55	55	55	55
SGX	47	42	47	42	37	42	42
MTR	53	42	42	37	37	47	37
HNX	63	63	47	42	21	26	21
SEW	57	48	38	38	33	5	5
OTX	81	71	71	71	62	67	57
TWC	33	33	22	22	17	22	17

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

- GOES Low Cloud Base Product (Basic, Jan 30 *more coming in February)
- Water Vapor Imagery and Potential Vorticity Analysis (Intermediate, Jan 18, 22, 31)
- Use of Ensembles in the Forecast Process - Cold Season Version (Basic, Jan 17, 24, 29)
- Satellite Interpretation of Orographic Clouds / Effects (Basic, Jan 24)
- MODIS Products in AWIPS (Basic, Jan 28)
- CRAS Forecast Imagery in AWIPS (Basic, Jan 29)
- Basic Satellite Principles (Basic, Jan 30)

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

Failing Network Switch Replaced: During the week of December 3rd, SOD staff traced increasingly disruptive network anomalies to a failing network switch. The problem was initially mitigated by directing streams of cool air at the switch giving SOD and SSD staff time to configure and install replacement switches. They then moved subnets off the failing switch in a phased approach. A hearty thank you to Chris Hornbrook and Mike Doney for resolving this significant problem.



Graham Stork, IT Computer Systems Manager, turns packaging tape and a cardboard box into a "state-of-the-art" temporary cold air duct to route cool air to overheating switches.

Web Services Caching Service Brought On-line: On December 3rd Western Region started using a content delivery network (CDN) to provide product caching for WR web services. The move to this caching service was coordinated with the NWS Office of the Chief Information Officer (OCIO). Though this transition has not been seamless, our customers have significantly benefited. On eleven days since the transition to this service the combined output in bits per second of the caching service provider and WR servers has exceeded the capacity of our DS3 (45Mbps) circuit. (Last year this level of traffic would have significantly degraded web services for all WR web sites hosted by the Regional Office.) On several of these days the capacity of the circuit was exceeded by up to 35 Mbps, for hours at a time...yet web services continued to work well. On January 4, 2008 the caching service and our web servers responded to over 58 million hits and reached a combined maximum of 80 Mbps of products delivered to our customers. This is over twice the maximum load we could handle last year.

WWA Map Production Moved to Consolidated Web Farms: All WR WWA map production was moved from WRH to the consolidated web farms located at Central Region Headquarters, Southern Region Headquarters, and National Headquarters. This results in more reliable and faster service to customers due to the redundant backup and load balancing inherent with the consolidated web farms. Special thanks are due to Randy Weatherly (ITO, SLC) for modifying and updating the point and click code and sharing his optimized code with other regions.

Repairs: Tom Page and Lee Jenson traveled through a bad snow storm to Jerome, ID on December 21st to repair a broken power line on the ASOS . The repair was made in short order and Boise ET, George Buckwold, brought the equipment back on line. It was a nice team effort in returning broken equipment to operation status during the busy holiday season.

Tom and Lee also traveled to Eureka, CA the week of December 3rd and replaced the station's diesel generator fuel storage tank. The existing fuel tank showed signs of fatigue and cracking. Current EPA upgrades were also installed with the help of the office staff.

Safety Tip - Power Outages: Numerous locations have recently experienced power outages due to storms. Here are some safety tips to consider now...prior to your next power outage:

- Use only flashlights for emergency lighting. Never use candles due to the fire hazard... The last thing you need is a fire when power lines...and possibly phone lines...are down.
- Turn off electrical equipment you were using when the power went out.
- Avoid opening the refrigerator and freezer to keep foods cold and frozen as long as possible.
- Never run a generator inside a home or garage due to the threat of carbon monoxide poisoning.
- If you use a generator, connect the equipment you want to power directly to the outlets on the generator. Do not connect a generator to a home's electrical system...as anyone working on power lines attached to your house may get electrocuted by the power your generator is sending out of the house and back down the line.
- Listen to local radio and television for updated information.

How Can You Prepare Before a Blackout Happens?

Assemble essential supplies, including:

- Flashlight
- Batteries
- Portable radio
- at least one gallon of water per person
- a small supply of food



ADMINISTRATIVE MANAGEMENT DIVISION

Position Selections:

CAROL CILIBERTI has been selected for the Lead Forecaster position at the WFO in Eureka, California

EVAN SIMPSON has been selected for the NEXRAD ET position at the WFO in Flagstaff, Arizona

THOMAS RENWICK has been selected for the Forecaster position at the WFO in Pocatello, Idaho

DAN KEETON has been selected for the Forecaster position at the WFO in Portland, Oregon

BRUCE BAIRD has been selected for the NEXRAD ET position at the WFO in Reno, Nevada

STEPHANIE SULLIVAN has been selected for the MET Intern position at the WFO in San Diego, California

NANETTE HOSENFELD has been selected for the MET Intern position at the WFO in Salt Lake City, Utah