

NOAA's NATIONAL WEATHER SERVICE Western Region Notes

November 30, 2007

REGION DIRECTOR'S OFFICE



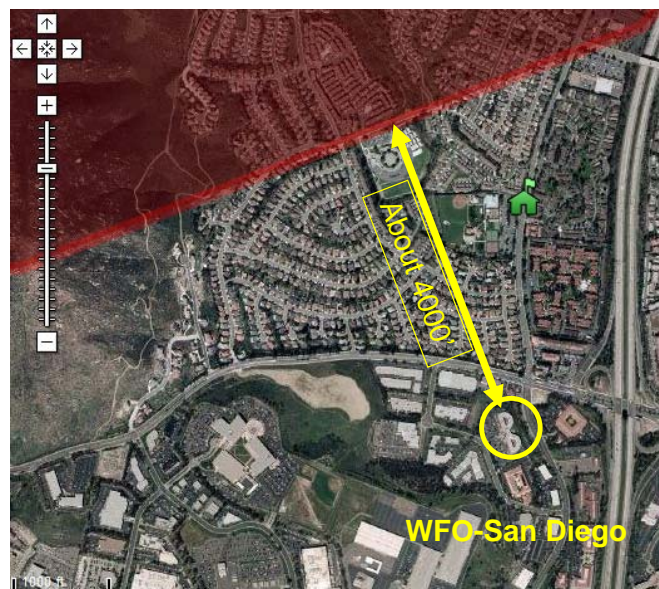
As 2007 comes to an end, we find ourselves reflecting on the events of the past year and on our many accomplishments. The Western Region had a very active year that included several high impact storms, intense heat, extreme cold, record breaking floods and devastating winds and wildfires. In addition, we have made many positive and innovative strides in enhancing our data collection networks and dissemination methodologies, upgrading our critical infrastructure (IT, facilities, etc.), and delivering critical information to the public and the emergency management community. I appreciate the hard work and sacrifices each of you make on behalf of the National Weather Service. Please accept my thanks for a job well done!

I would also like to take this opportunity to wish you all a very happy and safe holiday season. I look forward to working with you in the year to come.

Seasons Greetings and best wishes for the New Year.

METEOROLOGICAL SERVICES DIVISION

Southern California Wildfires: Because of excessively dry conditions, much of southern California has experienced extreme wildfire danger. A major Santa Ana wind event took place 21-25 October, with 517,417 acres burned in 23 wildfires across 7 counties of southern California. All fires were contained as by 21 November. A total of 3,204 structures were destroyed in the fires, including 2,233 residences. There were ten fatalities reported with 139 injuries. Outstanding weather support for fire agencies was provided by WFO Los Angeles/Oxnard and WFO San Diego, with first notice of the impending event occurring nearly a week prior. Numerous phone briefings took place with fire agencies prior to and during the fires. Red Flag Warnings were issued nearly 36 hours prior to the event. On early Monday morning, 21 October, WFO San Diego was



forced to evacuate, requiring service backup from WFO Los Angeles/Oxnard. Backup occurred for approximately 21 hours.

Science on a Sphere at the California State Fair: Staff members from the NOAA/NWS and the California Department of Water Resources (DWR), teamed up to organize an exhibit at the 2007 California State Fair featuring NOAA's Science on a Sphere® (SOS). The SOS projected animated images of current weather around the globe, atmospheric rivers, remotely sensed North American snow cover, climate change, El Niño, the Solar System, and a simulation of the 2004 Indian Ocean tsunami. SOS was viewed by an estimated 300,000 people which made it not only the focal point of the DWR Climate Change exhibit, but the centerpiece for the entire fair.



Senior Meteorologist Elissa Lynn from the California Department of Water Resources makes a presentation using the Science on a Sphere globe as a large crowd gathers at the California State Fair.

Aviation Nation Air Show: WFO Las Vegas participated in the Nellis Air Force Base 60th Anniversary [Aviation Nation Air Show](#) Nov. 9-11. Forecaster Mike Kennedy and WCM Faith Borden presented information on weather safety and aviation hazards to over 500 Clark County students which included the local science and aviation magnet schools. Lead forecaster John Adair, ASA Rosalin Cianflocco, ITO Joseph Nemeth, and SOO Stan Czyzyk answered weather and climate questions for over 350,000 at a NOAA/ NWS information booth.



Get to Know NOAA: On Nov 1st, NOAA's Western Regional Center in Seattle held a 'Get to Know NOAA' symposium at the Sand Point facility. WFO Seattle participated by giving a winter weather presentation and staffing a booth, joining eight other NOAA booths. The event

keynote was Dave Zilkowski, Director of the NOAA's National Geodetic Survey. He gave a presentation on the history of the Survey agency going back 200 years and dedicated a new survey marker just outside the NOAA Western Regional Center auditorium.

Service of the Week: This week's Service of the Week is an aviation discussion from WFO Reno forecaster Jim Wallman.

The morning of Thursday, December 6th a storm was approaching Western Nevada. IFR conditions were expected after sunset with 2-3 inches of snow at the Reno airport overnight. The aviation section is pasted below. The level of detail, clarity and confidence expressed in the aviation section of the AFD truly helps the customer. Reno received thanks for the aviation discussion from a prominent aviation customer. Good job Jim!

.AVIATION...

VERY HIGH CONFIDENCE IN THE APPROACHING WINTER STORM. PRECIP WILL BE ALL SNOW FOR KTVL-KTRK AND VIS WILL TAKE SOME TIME TO DROP. [MVFR](#) CIGS WITH LCL [IFR](#) THROUGH 02Z THEN [IFR](#) THROUGH 12Z FOR THOSE TERMINALS. PROB OF CIGS [BLO](#) 1SM IS 80 PCT WITH SEVERAL INCHES OF SNOW TO FALL ON RUNWAYS.

FOR KRNO...PRECIP WILL BEGIN AS RAIN AS EARLY AS 20Z AND BE FAIRLY LIGHT WITH MAINLY [MVFR](#) CIGS. EXPECT CHANGEOVER TO SNOW TO OCCUR BETWEEN 03 AND 06Z WITH 80 PCT CONFIDENCE THE CHANGEOVER WILL OCCUR DURING THIS TIME. AFTERWARD...[IFR](#) CIGS/VIS THROUGH 15Z WITH OCCASIONAL BREAKS. EXPECT 2-3 INCHES OF SNOW ON RUNWAYS WITH BEST CHANCE OF ACCUMULATION BETWEEN 09 AND 15Z.

FOR KLOL...LOWER ELEVATIONS HERE WILL KEEP PRECIP ALMOST ALL RAIN. CIGS WILL BE REDUCED TO NEAR 2KFT IN THE RAIN WITH PEAK PERIOD BETWEEN 00 AND 09Z.

EXPECT GRADUALLY IMPROVING CONDITIONS FRIDAY AFTERNOON ALL TERMINALS. WALLMANN

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/>

Western Water Supply Web Page: November 28 public rollout starting with a GOTOMeeting user community conference call:

Water supply forecasts are an important service provide by the western River Forecast Centers (RFCs). WR/SSD has been developing a one-stop shop for forecast users to access NWS water supply forecast.

Version 2.0 will feature new applications and a new look.

Applications in version 2.0 will include:

- * New, interactive forecast map
- * Forecast evolution plots which include options for ESP
- * Forecast ensemble application
- * Verification of historical forecasts
- * Data access

The current version (1.1) of the website is at:

www.cbrfc.noaa.gov/westernwater

When released, the new version (2.0) will be at:

www.nwrfc.noaa.gov/westernwater

While the core development activities have occurred through the work at WR/SSD, CBRFC and CNRFC, this is a multi-region effort. Water supply forecasts are now coming from the WR, CR and SR RFCs with responsibility for hydrologic areas over the mountainous west. Kevin Werner (WR/SSD) is the development team lead.

Debris Flow Update: A meeting was held November 1-2 in order to plan this winter's debris flow project. This is the third year of the joint USGS and the NWS prototype project. The meeting was attended by the USGS, NWS WR, Oxnard WFO, and San Diego WFO and led by Kevin Werner (WR/SSD). The major outcomes of the meeting were:

- **Research Area:** The group selected the Canyon burn area around Malibu as the research area for the upcoming winter season. OAR is looking at either the Santa Monica airport or Los Angeles International airport as the site for the SMART-R. A wide array of USGS instruments, including many real time sensors, will be deployed to the research area.
- **Burn Area guidance for the WFOs:** The USGS will develop hazard maps for the 25 2007 burn areas in southern California by the end of November. Nine hazard maps will be produced for each burn area including debris flow probabilities, volumes, relative hazards, each for three different intensity storms. Initially these will be done using the FFMP basins. Ultimately they may be remapped to "impact basins" with some sort of impact assessment at basin outlets.
- **Coordination calls:** Mark Jackson (Oxnard WFO) will coordinate a ~72 hour coordination call in advance of major storms with the Multi-Agency Support Group
- **NWS products:** Joe Dandrea (Oxnard WFO) suggested the NWS flood advisory product (FLS) be used for minor impact events that only marginally exceed thresholds or are in areas with minimal impacts instead of the flash flood warning product (FFW) that has been used so far. WR is working with NWSHQ to finalize guidance.

- **Publicity:** NOAA just released the initial joint NWS/USGS news release. The USGS suggested an iterative publicity strategy where press releases, media coverage, etc would be continuous through the winter seasons. Opportunities the hand off of hazard maps to NWS, the SMART-R deployment, etc.

Improve Gridded Forecast Program through the use of Verification: WR/SSD is leading this effort and the project has 3 primary goals: Use verification to

- improve forecast services,
- and/or reduce workload, and
- focus on High Impact events.

We are working closely with the WR SOOs to share results with the forecasters and encourage the forecasters to use the data as part of their shift decision-making process.

- **Summer Project Completed:** WR/SSD led the SOOs through a series of assignments and conference calls that examined our gridded temperature and dew point forecasts. These fields are critical to the summer fire weather season. Some surprising results emerged. Bias Corrected (BC) GFS and Bias Corrected (BC) GMOS emerged as two forecast first guess that provide very good performance during periods with no major regime changes and the forecaster can add value at Days 6 and 7. Each SOO has shared the results with the forecasters.
- **Winter High Impact Project:** QPE, QPF and their role in High Impact Forecasts is the focus for this winters project. Toward that goal, several major new or enhancements have been made
 - **Boiver 2.0:** Tim Barker (SOO/Boise) has developed and released a major enhancement to Boiver 2.0 Ken Pomeroy (WR/SSD) and David Myrick (WR/SSD) have bundled the software up into a Modnote and are working on a training module. The second homework assignment focuses on exploring some of these new features.
 - **POP/QPF/High Impact Verification web site:** WR/SSD has developed a new POP/QPF verification web site that focuses on whether the office captured the basic trends of the QPF and POP forecast correctly. Too often, QPF verification has been point based and subject to uncertainty and debate due to the difficulty with the spatial and temporal variability of precipitation. Rather than get caught up in the finer details, the web site seeks to look at the evolution of the larger event and provide the office feedback on whether they captured the event. This is an prototype effort and we expect to keep making changes. The web page is available on AWIPS at 165.92.200.49:8080.
 - **QPF Helper:** Ken Pomeroy has released a new version of QPFhelper. QPFHelper is a GFE tool that makes it easier for the forecaster to intelligently edit QPF in complex terrain. The tool has been released nationally.
 - **Diurnal from Model:** Aaron Sutula (WR/SSD) has developed a GFE smart tool that allows the forecaster to spread the forecast from the model into the forecast grids using diurnal trends. The result is a better gridded forecast.
 - **RTMA /Analysis/Good enough forecasts:** David Myrick (WR/SSD) continues to work with NCEP and Univ of Utah to provide feedback on the performance of the RTMA. The RTMA keeps getting better with each new iteration. Once the

RTMA is acceptable, David Myrick has developed a method where we can factor in observational uncertainty/representativeness into the verification results. David presented this concept at last months National Verification Meeting at NWSHQ.

- **SOO/DOH Calls:** WR/SSD continues to lead the verification effort through monthly GOTOMeeting conference calls with the SOO/DOHs. All of the training, modnotes and conference call recordings from the last 18 months can be found at: http://ww2.wrh.noaa.gov/ssd/digital_services/ We have made all of this available to NWSHQ and the other regions.

Training

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 WFO Meteorologist, Hydrologist, Operational Shift Worker, HMT, and Physical Scientist.

Teletraining Sessions for December and January: 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.

- Water Vapor Imagery and Potential Vorticity Analysis (Intermediate, Dec 13,19,21)
- Use of Ensembles in the Forecast Process - Cold Season Version (Basic, Dec 12,13,17,19,20,27)
- Cyclogenesis: Analysis utilizing Geostationary Satellite Imagery (Basic, Dec 14)
- Satellite Interpretation of Orographic Clouds / Effects (Basic, Dec 18)
- MODIS Products in AWIPS (Basic, Dec 11,28)
- Basic Satellite Principles (Basic, Dec 18)

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

Driving on Snow and Ice: Winter has arrived throughout Western Region...and with it snowy and icy roads. Here are a few important driving tips to remember as you and your family travel this holiday season.



The most important tip...If the weather is inclement and the roads are slick and dangerous, don't drive. Give the road crews time to clean up the roadbeds.

- Before beginning your trip, know the current road conditions.
- Be alert for potential driving hazards including downed branches, trees, electric lines and icy areas, such as shady spots and bridges.
- Leave a few minutes early to allow extra time to get to your

destination.

- Slow down. Triple the usual distance between your car and the one ahead.
- Stay in the plowed lane; avoid driving over the ridges between the plowed areas. If you must switch lanes, slow down, signal and move over slowly.
- Don't pass a snowplow or spreader unless it is absolutely necessary.
- Don't park along the street. Snowplow drivers can't fully clear a road if cars are in their way.
- If you skid, steer into the skid. If the back of your car is skidding to the left, for example, turn the steering wheel to the left.
- Don't pump your brakes, and avoid locking them up. If your brakes lock, take your foot off the brake pedal for a moment.
- If your car has an Anti-lock Braking System (ABS) and you must brake, be sure to press the brake pedal hard and hold it down. You may hear a loud chattering noise coming from the breaks and wheel area...this is the ABS system doing its job keeping your breaks from locking and allowing you to maintain control.
- If you're involved in a minor fender-bender, move the cars out of the lanes of travel.
- Keep an emergency winter driving kit with a blanket, additional warm clothes, and flashlight in the car.
- While driving, keep your headlights on. Keep snow and ice off your mirrors, windows and lights.
- Always, wear your seatbelts.

New Weather Sensors in Utah and Idaho: A collaborative effort among NWS, Bear Lake Amateur Radio Group, Idaho Bureau of Homeland Security, Utah Highway Patrol, Sprint, and the Utah Department of Natural Resources resulted in the installation of several new weather stations in Utah and Idaho. The new stations will transmit data over amateur radio frequencies using the Automatic Position Reporting System (APRS) and be available on the Mesonet.

ADMINISTRATIVE MANAGEMENT DIVISION

American Indian Heritage Month, November 2007: American Indian Heritage Month is celebrated annually every November. This November, Mike Cantin, WR's Native American Special Emphasis Program Manager, from WFO Pocatello, ID, interviewed Ms. Lori Edmo-Suppah, member of the Shoshone-Bannock Tribe of Eastern Idaho. The purpose of this interview was to get a Native American's perspective on what the month of November means to American Indians.

Ms. Edmo-Suppah shared with Mr. Cantin that the Shoshone-Bannock Tribe celebrate their heritage on Indian Day, the last Friday in September, not in November. Lori further stated that it is important to note that what is mentioned in history books is not always accurate. A lot of it is written from a non-Indian perspective. Most written Idaho history mentions only the Nez Pierce tribe, when there are actually five tribes in Idaho.

Lori also shared other challenges facing her tribe and other tribes in general. If you would like to have a transcript or more information on this article, please contact Mike Cantin.