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The Coastal Front

Spring 2011

Volume II-1

Albert Wheeler Retires

By John Jensenius, Warning Coordination Meteorologist

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Albert (Al) Wheeler, Meteorologist in Charge (MIC), WFO Gray, Maine, retired from the National Weather Service (NWS) on December 31, 2010 with more than 33 years of dedicated Federal service.

Al earned a BS degree in Meteorology from the State University of New York at Oswego in 1975. His NWS career began in October 1977 when he accepted an Intern position with the NWS Forecast Office in Bismarck, North Dakota. In September 1980, Al was selected as a General Forecaster; then in March 1983, he was selected as a Lead Forecaster. Shortly before leaving Bismarck, he experienced the coldest day of his life with a low of -40° F and a high of just -20° F (with a 40 mph wind).

In July of 1985, Al and his family returned to the East Coast when Al transferred to the Philadelphia Forecast Office as a Lead Forecaster. In May of 1987, Al was selected as Deputy MIC at the Forecast Office in Cleveland where he had the opportunity to sharpen his supervisory and management skills.

In December of 1990, Al was selected as the MIC of the Portland Maine WFO, where he has remained for the past 20 years. During this time, Al led the office through countless significant weather events. In fact, during his first year on the job in Portland, Al experienced the wrath of Hurricane Bob in August, a severe thunderstorm in September that downed hundreds of trees in his new hometown of Cumberland, and the infamous Halloween Nor'easter (also known as "The Perfect Storm"). He also oversaw the deployment of the new Doppler Radar and the move from the Portland Jetport out to the town of Gray. Al has also been actively involved in the Federal Executive Association of Southern Maine and the Combined Federal Campaign's local Federal Coordinating Committee.



Albert Wheeler, MIC, retires after 33 years

Photo by John Jensenius

In retirement, Al and his wife Pat have planned several trips to destinations with warm waters. Al hopes to spend more time with several interests and hobbies including sailing, astronomy, bird watching, and coin collecting. He also plans to get more involved with volunteer activities. We wish Al and his family the best in his retirement.

Winter Weather Review

By Chris Kimble, Meteorologist

The winter season started off warm in December, lengthening the streak of 14 straight months of above normal temperatures in Portland. The first inch of snow finally fell on December 20, just in time to ensure a white Christmas. A strong storm system brought widespread snow, wind, and blizzard conditions to the region on December 26-27.

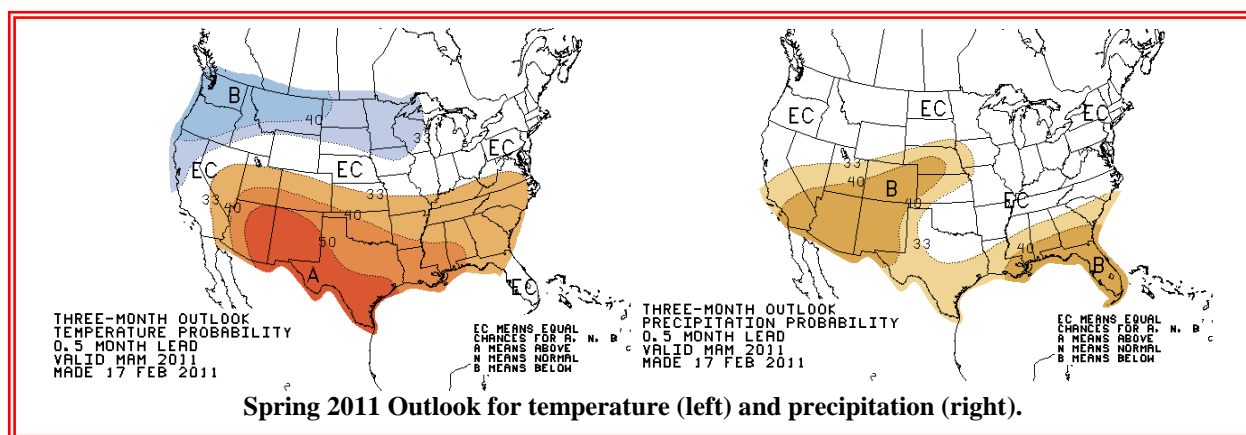
The year 2011 started off balmy with a high temperature of 54 degrees in Portland on January 1. But by the middle of the month, the weather took a turn toward much colder temperatures and new snowstorms every few days. The first and largest of these storms occurred on January 12 when 13.0 inches of snow fell. By the end of the month a total of 29.1 inches of snow had fallen (most since 2005). Arctic air moved into the region the third week of January with high temperatures in the single digits to near zero across the area on January 24. Temperatures at night fell below zero area-wide with many areas lower than -10° F. Portland reached -13° F, the coldest temperature in two seasons. The Portland Jetport also went 42 straight days with high temperatures not rising above 40 degrees from January 2 through February 14. This 42-day stretch ties for the 6th longest stretch of 40 degrees or colder since records began. The longest stretch was a whopping 70 days in 1970-71. The prolonged cold allowed Portland to finally end the streak of 14-straight months of above normal temperatures as January and February both ended up below normal.

The cold and snowy trend continued through the first half of February. Total snow for the month was 27.0 inches in Portland. The total depth of snow on the ground reached 23 inches by the end of February, the highest snow depth in Portland in six seasons (2005).

Spring Weather Outlook

By Chris Kimble, Meteorologist

The [Climate Prediction Center \(CPC\)](#) produces three-month temperature and precipitation outlooks for the United States. The current forecast for this spring (March, April, and May) is below. The forecast indicates equal chances for above, near, and below normal temperatures and precipitation over New England. This means there are no major climatic signals which provide a good indication as to whether this spring will be colder/warmer or wetter/drier than usual in this part of the country. Spring is a volatile season when winter's cold competes with the inevitable approach of summer warmth, often with large swings in temperature as weather systems track quickly across our area. Winter snow pack has normally reached its peak with the thaw beginning in March. Most areas see the last of the snow melt in April. The last freeze normally occurs in May, with average high temperatures reaching the 60s and 70s by the end of the month. Normally precipitation during the spring months totals 9 to 12 inches, with snowfall still common through March and early April.



Spring Thaw Can Lead to Flooding

By Tom Hawley, Hydrologist

As the spring thaw approaches, Maine and New Hampshire residents will have to keep their guard up for spring flooding. This is a yearly ritual for the northern states. During the winter, residents of Maine and New Hampshire watch the snowpack increase. We hope that by late March or April the weather becomes favorable to slowly erode the snowpack so that ground water is replenished but homes and businesses don't get flooded. While flooding can occur at any time of the year, Maine and New Hampshire are most at risk during the spring when we have a deep snowpack with large amounts of water stored in it. Hydrologists in both Maine and New Hampshire perform snow surveys during the late winter and spring to determine the amount of water in the snowpack. This information is then used in the hydrologic models along with temperature, wind, humidity, and rainfall to determine how high the rivers will rise.

Another aspect of the spring thaw is the possibility of ice jams. As river levels increase due to runoff from rainfall and melting snow, the ice cover begins to break and move downstream. As the ice moves downstream it may encounter an island or bend in the river which will tend to slow the ice and completely stop it if the river flow is not high enough to transport the ice past the obstruction. A constriction in the river or an area of the river that transitions from a steeper slope with faster flow to one that is flatter with a slower flow will also be a point where ice may accumulate as it moves downstream. Ice jams can occur very rapidly with little if any warning. There are other factors that will decide how strong the jam will be such as ice thickness and hardness. Thick and hard ice will result in a more severe jam.

The National Weather Service issues several different products to alert the public to the possibility of flooding. **Winter/Spring flood outlook:** Starting in early January this product is issued bi-weekly to inform the public about the risk of flooding over the next 2 weeks and beyond.

Hazardous Weather Outlook: Issued daily and covers a 7 day period to alert the public to the possibility of any hazardous weather that may occur including flooding.

Flood Watch: Issued if the forecaster is 50-80 percent sure that flooding will occur in the watch area within 48 hours.

Flash Flood Warning: Issued for individual areas when very heavy rainfall in a short period of time causes rapidly rising water levels. Flooding usually occurs and is over within 6 hours. This product will also be issued to warn the public of a dam break.

Flood Warning: Issued for whole counties or individual rivers when rainfall and/or snowmelt causes flooding on rivers and streams. Forecast crest height information is provided in Flood Warnings for major rivers.

Flood Statement: Used to issue a Flood Advisory, if flooding is of a minor nature or just a nuisance.



Ice Jam on the Sandy River in Farmington, ME in January 2010

Photo by Butch Roberts

If you live in a flood prone area, you should have a flood plan so that you know what to do when the rivers rise. Below are some links that can help you gather the latest information on weather and potential flooding, and also help you to develop a flood plan if you don't already have one.

<http://water.weather.gov/ahps2/index.php?wfo=gyx> (River Stages and Forecasts)

<http://www.nh.gov/oep/programs/floodplainmanagement/aboutus.htm> (NH Floodplain Management)

<http://www.state.me.us/spo/flood/index.htm> (ME Floodplain Management)

<http://me.water.usgs.gov/> (ME Water Science Center)

<http://nh.water.usgs.gov/> (NH Water Resources)

http://www.maine.gov/rfac/rfac_snow.shtml (ME Cooperative Snow Survey)

Staying Safe When the Waters Rise

By John Jensenius, Warning Coordination Meteorologist

Flooding is the top storm-related killer in the United States, on average, claiming the lives of about 100 people annually. Typically, more than half of the people killed by floods are driving or riding in vehicles. Most of these victims are trapped in their cars or drown after leaving their vehicles to escape the flood waters.

Water weighs about 62 pounds per cubic foot and the many cubic feet of water in a flooded stream will exert a tremendous force on anything in its path. Only a foot of rapidly moving water is capable of washing many vehicles off the roadway and two feet of water will float most vehicles. Additionally, when roads are flooded, it can be impossible to tell whether the road bed is still secure. The threat to drivers increases at night when darkness limits visibility. Every year, a number of flood victims actually drive directly around barricades and into the raging waters of a washed-out roadbed.

Another common mistake made by flood victims is to try to swim or wade across flooded areas. Victims often find the force of the current too strong and are swept to their deaths. You should always keep a safe distance from any rapidly moving water and never stand on a bridge to watch the raging waters below. It's especially important to keep young children away from rain swollen rivers and streams. Curiosity often draws them too close to the water's edge and one slip can lead to disaster.

Many campgrounds are susceptible to flooding due to their proximity to rivers and streams. If you are camping, beware of the heavy rains that often accompany thunderstorms and can turn a gentle stream into a raging torrent of water. This is especially true at night when the escape routes to higher ground may be difficult to discern. In 2010, 20 people lost their lives in Montgomery, Arkansas when a flash flood tore through a campground at night.

The good news is that most flood fatalities are preventable. Here are some flood safety and preparedness tips that could save your life.

- * Never drive a car into a flooded roadway! Water levels are often difficult to judge, particularly at night and you may not be able to tell if the roadbed is still there.
- * Be especially cautious at night when darkness makes it difficult to see flood dangers. If driving, slow down so you have more time to react to potential hazards.
- * Whether you are in a vehicle or on foot, always remember if you come upon a flood area, "TURN AROUND, DON'T DROWN!" It could save your life.
- * Keep a safe distance from rapidly flowing water. Monitor children closely when flowing water is nearby.
- * Monitor the latest forecast and listen for any alerts for your area to warn you of impending hazardous situations.
- * During heavy rainfall, do not camp or park in flood-prone areas.
- * Monitor river or stream levels and be prepared to seek higher ground, if conditions warrant.
- * If ordered to evacuate, do so immediately.



Local Weather Observers Needed

By Stacie Hanes, Meteorologist

The Community Collaborative Rain, Hail and Snow Network, or CoCoRaHS for short, is a network of volunteer backyard weather observers working together to measure and map precipitation in their local communities. CoCoRaHS is a non-profit community-based program which had its origins at Colorado State University in the late 1990s. By using low-cost measurement tools, stressing training and education, and utilizing an interactive website, the aim is to provide high quality data for natural resource, education, and research applications.



CoCoRaHS has now been established in all fifty states. The neat thing is that anyone with an enthusiasm for watching the weather can participate. By providing daily observations, participants are contributing an important piece of weather information to many users.

So how does it work? Every time it rains, snows, or hails, volunteers take precipitation measurements and enter them onto a website (<http://www.cocorahs.org>). Once the data are entered, they are then displayed on a map. The data are analyzed and used for many things ranging from water resource analysis to flood warnings. Some users include the National Weather Service, emergency managers, ranchers and farmers, and teachers. NOAA is a major sponsor of CoCoRaHS. We are always looking for more observers, so anyone interested in joining CoCoRaHS should visit the above website and click "Join CoCoRaHS". Although formal training is not a requirement, keep an eye out for upcoming training dates this spring.

WFO Gray Forecaster Retires after 34 years

By Albert Wheeler, Meteorologist-in-Charge

WFO Gray forecaster George Wiseman retired from the National Weather Service on January 1, 2011, after 34 years of dedicated Federal service. George's NWS career began in July of 1981 with an assignment at the Weather Forecast Office in Albany, NY. In May 1985, George was promoted to a General Forecaster position at Portland, ME, where he worked until his retirement. At Portland, George participated in two office moves. The first was the move from the Federal Building on Forest Avenue to the Portland airport in 1988. The second was the move from the Portland Jetport to the new facility in Gray in 1994. During his career, George participated in the evolution of NWS warning and forecast programs, from the early days of teletypes, manual observing systems, facsimile maps and WSR-57 radar, to the modern era of automated weather observations, Doppler weather radar, and computer workstations. During his service at the Portland office, George provided leadership for a number of important programs, including the Equal Employment Opportunity program, Aviation Weather program, Fire Weather program, and the station library. George's years of experience, professionalism, and dedication to duty will be missed.



George Wiseman retires after 34 years of federal service.

Photo by John Jensenius

WFO Gray Welcomes Three New Employees

By Albert Wheeler, Meteorologist-in-Charge

WFO Gray would like to welcome three new employees to the office. They are all enthusiastic about serving the people of New Hampshire and Western Maine.

Michael Kistner has been selected as a new Meteorologist Intern. He most recently served as a Captain at Keesler Air Force Base in Mississippi where he was a Weather Instructor. Mike's previous assignments included serving as the Executive Officer at Hickam Air Force Base in Hawaii where he planned and organized executive support services, functions and activities. Prior to Hickam, Mike served as the Weather Station Supervisor at Eielson Air Force Base in Alaska where he managed a 12 person weather station. Mike also served as the Lead Aviation Forecaster at Eielson, and as the Lead Synoptic Meteorologist at Hickam. Mike was awarded Flight Commander of the Quarter honors on two occasions. Mike received his Bachelor's degree in Meteorology from Oneonta State University in 2002.

Margaret Curtis has been selected as a new Meteorologist Intern. She was recently a meteorologist with the US Army at the Dugway Proving Ground in Utah, where she had worked since May 2007. Her accomplishments include developing a web-based tracking system for weather station meta-data which improved record keeping and assisted in locating instruments in need of calibration, serving as the lead developer for the Fusion Field Test 2007 website, and developing a real-time electric field display tool to assist forecasters in assessing lightning hazards. Margaret has contributed to 8 professional papers in the past 6 years. She received her Master's degree in meteorology from the University of Utah in 2007, and completed her undergraduate work in the Honours Atmospheric Science program at McGill University in 2004.

Chris Legro has been selected as a new General Forecaster. He has served as a Meteorologist Intern at WFO Davenport since 2008. During his tenure at Davenport, Chris gained valuable forecast and warning experience. He led the upper air program and served on the office leadership development and outreach teams. Chris also led an office seminar on virtual storm chase online, which was used as a training tool at Davenport during quiet weather to prepare for and enhance severe weather skills. His previous experience included working as a teaching assistant at the University of Massachusetts Lowell while earning his Master's degree, and completing a student volunteer internship at WFO Taunton. He received a BS degree in Atmospheric Science from Cornell University in 2006 and a MS in Environmental Studies from UMASS Lowell in 2009.

***For questions, comments, or suggestions contact us at
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