



# *The Coastal Front*

## *Summer 2012*

Volume III-2

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### ***Wicked Weather Forum Draws Crowd***

By John Jensenius, Warning Coordination Meteorologist

On Saturday, April 7th, the National Weather Service and the University of Southern Maine sponsored the Wicked Weather Forum in Portland at the Hannaford Lecture Hall. The event was a first of a kind in northern New England and was free and open to the public. Between 120 and 150 people attended the event and got to hear from and talk to many of the local meteorologists, including most of the local television weathercasters. The forum included talks about hurricanes, tornadoes, lightning, and nor'easters; and how we can prepare for these storms. Also included were talks on Portland's weather extremes and the extreme weather atop Mt. Washington. In addition, there were talks about observing, forecasting, and broadcasting the weather. Finally, we heard how changing weather conditions could potentially affect water levels along the Maine coast and what can be done to build more resilient coastal communities.



**Figure 1: NWS Meteorologist-In-Charge, Hendricus Lulofs, and NWS Information Technology Officer, Andy Pohl, prepare to demonstrate the weather balloon to attendees of the Wicked Weather Forum.**

The feedback that we received was very positive and we look forward to similar events in future years. If you attended the forum we'd appreciate hearing from you at [GYX.feedback@noaa.gov](mailto:GYX.feedback@noaa.gov).

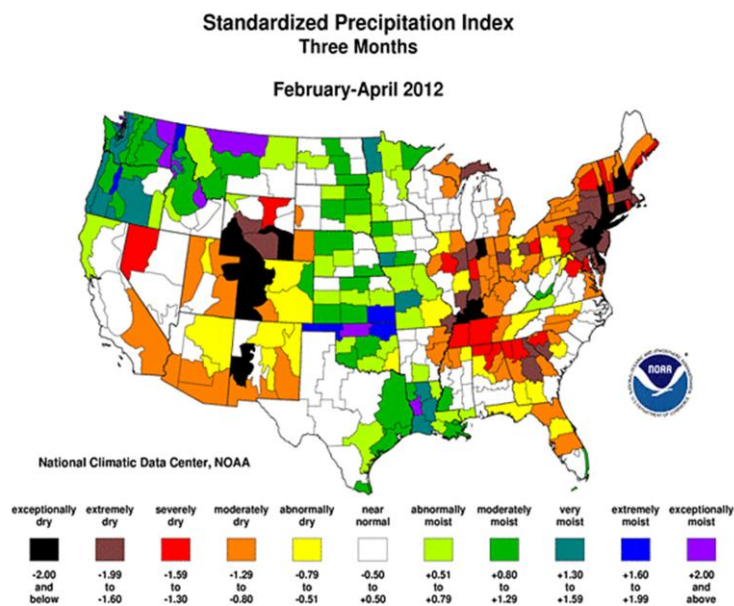
## ***Drought in New England***

By Stacie Hanes, Senior Forecaster

Early spring in New England turned out to have below normal precipitation and above normal temperatures. This resulted in a brief but intense period of drought and wildfires. However, the warmer weather over an extended period of time resulted in accelerated melting of the snowpack and fewer issues with river ice jams than normal.

The end of 2011 was warmer than normal for New England, with average temperatures above normal every month since October. The first 4 months of the year did nothing to improve the situation. Both New Hampshire and Maine had their 9<sup>th</sup> warmest Aprils since 1895. It was the warmest January through April in New England for all states except Maine, which had its 3<sup>rd</sup> warmest January through April since 1895.

Precipitation statistics for the area were not much better. New Hampshire had its 3<sup>rd</sup> driest February through April, while Maine's ranked 27<sup>th</sup>. Regionally, precipitation totals for the Northeast averaged below normal for this same period. April's regional total averaged 2.95 inches, or 81% of normal. In contrast, Maine was actually slightly wetter than normal in April. The U.S. Drought Monitor, which focuses on broad-scale drought conditions, categorized New Hampshire and Maine in moderate to severe drought during this time.



**Figure 2: The Standardized Precipitation Index (SPI) measures moisture supply. The SPI map shown here depicts the spatial extent of the dry period between February and April. Much of New Hampshire and Maine were 1.30 inches or more below normal for this period.**

The dry conditions resulted in numerous wildfires across the region. Wildfires don't usually become a concern in this area until late April, but firefighters found themselves called to wildfires about a month earlier than normal. Fire danger ratings, issued by the Maine and New Hampshire Forestry Services, were commonly at moderate or high by the middle of March. There were a total of 6 Red Flag Warnings issued by the National Weather Service in Gray for portions of New Hampshire and Maine from mid-March to mid-April.

## ***Introducing the New Lakes Recreational Forecast***

By Michael Kistner, Meteorologist Intern

The National Weather Service in Gray, Maine started producing daily recreational forecasts for Lake Winnepesaukee as well as Sebago Lake in Maine on May 24th. Before the lakes forecast initiative, the only nearby forecasts available were for local towns. However, these forecasts do not tell the whole story of what conditions may be occurring out on the middle of the lake. In particular, wind speeds are usually stronger out on the lake than they are over land. Depending on the wind direction, one side of the lake will see rougher waters due to the larger fetch of the winds traveling across the lake.

The new lakes recreational forecast product will be very beneficial to fishermen, boaters, and everyone who lives or vacations on the lake. There are still some minor obstacles to overcome to make sure that the product is accurate and beneficial. Building and maintaining a spotter network on and around the two lakes is essential to the continuous improvement of this product. Spotters can pass valuable real-time ground truth information such as visibility, wind, wave, water temperature and weather conditions to National Weather Service forecasters. This data can be used to verify forecast accuracy and help calibrate our evolving forecast techniques. The information collected will allow the forecasters to produce updates if necessary and can be used for further understanding of the land versus water wind relationships and also the lake wind and wave relationships. Additionally, this information can assist in assessing new high resolution forecast models that have been created specifically for wind and wave forecasting on the lakes. To report conditions on the lake, call the NWS in Gray at 1-800-482-0913.

The lakes weather forecast provides mariners and recreational boaters with a valuable planning tool. This forecast can be used to help boaters decide what part of the lake may have the best conditions, or whether or not they should even go out on the lake due to adverse conditions. The National Weather Service's goal is to help people stay safe this summer on the water. The new lakes forecast product should reduce the amount of people who are surprised by the often unexpected conditions in different areas of the lake.

The National Weather Service continues to provide a Recreational Forecast for the higher summits of New Hampshire and western Maine. The new Lake Forecasts are produced as part of this Recreational Forecast and can be accessed through our internet home page or through this direct link:

<http://www.nws.noaa.gov/view/validProds.php?prod=REC&node=KGYX>

## ***New Surf Zone Forecast for Beachgoers***

By John Cannon, Senior Forecaster

A brand new Surf Zone Forecast (SRF) program began over this past Memorial Day Weekend! This value-added product will benefit our recreational users, who help to double Maine and New Hampshire's population during the warm season. The beach forecast will leverage the use of a high resolution, mesoscale model, which is run at the National Weather Service Forecast Office in Gray. It will serve customers through Columbus Day weekend. The information will be issued twice daily and is readily available on NOAA Weather Radio as well as our webpage located at [http://www.erh.noaa.gov/er/gyx/marine\\_weather.shtml](http://www.erh.noaa.gov/er/gyx/marine_weather.shtml)

In addition to the beach forecast; surf conditions, UVI index, water temperature, lightning threat levels and tides will be included in the service. Most importantly, the program will provide the forecast staff with rip current risk information. Rip Currents threaten thousands of swimmers each year and have been attributed to one of the leading weather-related casualties in the United States. They are fast moving channels of water formed under certain water and weather conditions that can quickly pull swimmers into deep water. To "Break the Grip of the Rip" it is recommended to swim parallel to the shore to escape the current before returning to the beach. Detailed rip current safety information can be found at <http://ripcurrents.noaa.gov/>

Rip current risk along the coast of Maine and New Hampshire will be assessed daily by the forecast staff. If it is determined the rip current risk is high, meteorologists on duty will issue a "High Surf Advisory" or a "Rip Current Statement" informing the public of the risk.

Verification is always critical to any forecast program. To assist the National Weather Service with confirming weather and water conditions along portions of our coastline, we have been in close coordination with lifeguard captains in the area. Their service is extremely valuable and much appreciated!

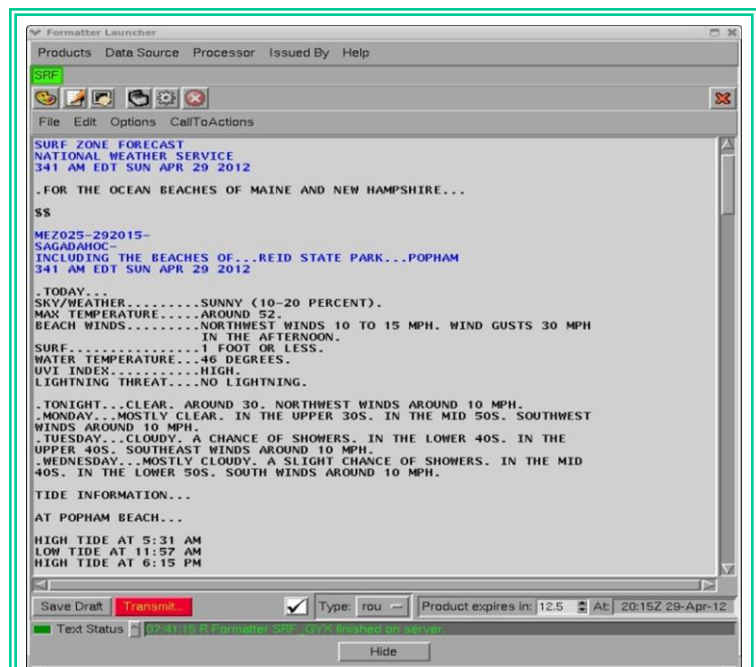


Figure 3: An example of the Surf Zone Forecast

## ***Avoiding the Grip of the Rip***

By John Jensenius, Warning Coordination Meteorologist

Ocean beaches are great places to spend a warm sunny day. The pounding surf, the warm sand and the ocean breeze can all contribute to an enjoyable and relaxing day. However, hidden danger can lurk in the ocean's surf. Dangerous rip currents often form along the beaches of Maine and New Hampshire and can quickly sweep a swimmer out to sea. If you're planning an adventure at the beach this summer, you should learn to recognize and avoid rip currents, and also know what to do if you or someone else gets caught in one

The movement of water along the coast causes channels of water to flow toward the beach in certain areas while channels of water flow away from the beach in other areas. Sandbars, jetties and piers often effect the development of these channels. The channels that flow away from the beach are called rip currents and they can be so strong that they can sweep even a good swimmer out to sea. Rip currents can be very narrow or they can be more than 50 yards wide.

### **Identifying a Rip Current:**

The surf can often give you clues as to which areas along the beach have rip currents. The outward flow of water away from the beach can cause the water to be different in color. The water in a rip current often contains more foam and has a greater turbidity as it carries sediment from the surf zone out to sea. Because the current in a rip current is flowing out to sea, the water may be churning or more choppy, and there may also be a break in the incoming wave pattern.

### **If You Are Caught In a Rip Current:**

The most important thing to remember is that you should remain calm and not fight the current. Instead, the best advice is to swim parallel to the shoreline until you're free of the current. Then, swim at an angle toward shore and away from the current. If at any time you feel that you won't be able to make it back to shore, face the shore and call or wave for help.

### **If Someone Else Is Caught In A Rip Current:**

The most important thing to remember is that you need to get help from a lifeguard. Don't try to rescue the person yourself. Many people have died trying to rescue others. If a lifeguard is not available, shout instructions to the person on how to escape. If possible, throw the victim something that floats. Finally, if you need further assistance, call 9-1-1.

### **For your safety:**

Know how to swim. Never swim alone. Obey all instructions and orders from lifeguards. Be cautious at all times and watch children carefully. If in doubt, don't go out!

For More Information: Visit NOAA's Rip Current web site: <http://www.ripcurrents.noaa.gov>



## ***Spring Weather Review***

By Chris Kimble, Journeyman Forecaster

The old saying is that March comes in like a lion and goes out like a lamb. A strong case for that expression can be made this year. On March 1 a heavy snowstorm brought 6 to 14 inches of snow to much of New Hampshire and western Maine. Portland received 13.0 inches from the event. This, combined with snowstorms in October and November, provided that approximately half of Portland's total seasonal snowfall fell outside of the winter months (December thru February). But the March 1 storm was the last significant storm of the season. By the middle of March most of the snow across the southern half of the area had melted and a record warm spell began. Portland saw 5 days with highs above 70, with a record high of 82 on the 22<sup>nd</sup>. Although the month ended on a cooler note, the month on the whole ended up being the warmest March ever.

The warm and dry trend continued through the first 2/3 of the month of April. But then a cool and wet period lasted for the last week of the month through the beginning of May. In fact, the thermometer did not rise above 50 degrees in the month of May until the 5<sup>th</sup> day of the month. A

	HIGH	LOW	AVE	PRECIP	SNOW
March	50.5 (+8.4)	31.8 (+6.9)	41.2 (+7.7)	2.05 (-2.19)	14.2 (+1.5)
April	57.9 (+4.6)	36.0 (+1.3)	47.0 (+3.0)	4.84 (+0.52)	Trace (-2.8)
May	64.5 (+1.0)	48.7 (+4.5)	56.6 (+2.7)	5.91 (+1.90)	0.0
Spring 2012	57.6 (+4.6)	38.9 (+4.3)	48.3 (+4.5)	12.80 (+0.23)	14.2 (-1.3)

Table 1: Spring 2012 climate statistics for Portland.

return to warmer conditions and more variable spring-like weather lasted through the end of the month.

On the whole, Portland saw its second warmest spring on record (slightly behind 2010) and the return to wetter conditions was able to put a big dent in the developing drought.

## ***NWS Welcomes New Observation Program Leader***

By Hendricus Lulofs, Meteorologist-in-Charge

Nikki Becker has been selected as the new Observation Program Leader (OPL) at the NWS Gray. Nikki arrived at our office this spring from the Juneau, Alaska office. While at Juneau she was very active in the observing program including being on the offices Cooperative Observing team, assisting in the management of cooperative observation sites, repairing and installing equipment, site inspections and training observers. Prior to joining the National Weather Service, Nikki spent several years in the Air Force where she was responsible for observing and quality control programs. We welcome Nikki to the NWS Gray office.

## ***CoCoRaHS Corner – Observing Hail***

By Chris Kimble, Journeyman Forecaster

The Community Collaborative Rain, Hail, and Snow Network (CoCoRaHS) is a volunteer network of observers who provide valuable information about the weather from their backyards. The reports of rain, hail, and snow are used by the NWS and many other organizations in research, forecasts, and warnings. You can be a CoCoRaHS observer! Just go to [www.cocorahs.org](http://www.cocorahs.org) to sign up. This week's topic of the CoCoRaHS Corner is hail reporting.

While large hail is rare in northern New England, it is most common during the early summer months. If you do observe large hail, it is important to relay your report to the NWS with an accurate measurement (or estimate) of hail size. Hail size is determined by the diameter of the hailstone. You can compare the size of hail to a coin or sports ball when reporting it or take a direct measurement with a ruler. It is important to get a good look at the largest hailstones before making an estimate as hail often sounds worse when falling on metal roofs and vehicles. The NWS considers hail of 1 inch in diameter (quarter-size) to be “severe” and large enough to cause damage. But hail of any size is significant enough to report. If you observe hail you can report this on the CoCoRaHS website and/or call the NWS at 1-800-482-0913. But most importantly, be safe when observing hail and avoid being injured by falling hailstones!



**Figure 4: An example of hail larger than quarters.**

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

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***Photo by Stacie Hanes***