

## **More about Long Range Forecasts**

**By Don Simonsen**

In the winter edition of Under the Big Sky, we talked about long-range forecasting, how and why they are composed, in particular, the 3-month outlooks. To provide more detail and account for local effects, in 2006, the “Local 3-month Temperature Outlook” product was launched. This gives the user an opportunity to see long-range outlooks for 10 specific locations in Northeast Montana. These are issued once per month, the third Thursday of the month, along with all other long range outlooks. Each outlook covers a 3-month time period, as far as a year in advance. To see this product on our internet: Under climate, click on local. The next page appears. Then click on “here” in the lead paragraph. The next page that comes up then shows the 10 locations in northeast Montana that can be clicked on to see “pie chart” style 3-month temperature outlooks for the next year. [http://www.weather.gov/climate/calendar\\_outlook.php?wfo=ggw](http://www.weather.gov/climate/calendar_outlook.php?wfo=ggw) ( “pie chart” is a circular graph, in this case, divided into 3 parts)

You can expand the size of the pie charts, or change the pie chart style to several graph or table formats, by going to “select product” at the bottom of the page. On these graph or table charts, probabilities of exceedence, 99% confidence range, a text discussion, recent history, and normals are just some of the information for the 10 locations that can be displayed. There are numerous links to the large-scale national outlook maps, and to other climate data and resources as well. Currently these outlooks are available for temperature only.

Why is there such little variation in the long term forecasts, and in the above, near, and below normal categories, which often appear split equally? The reason is that it reflects the limited accuracy that is most typical of long-range outlooks. Most often, all of the 3 temperature categories are not that far from 33 %. When any one category does exceed just 40 %, it is considered a relatively high confidence for a long term outlook. Note that there are several such outlooks for our area for the next year that do exceed 40 % chance in one of the categories. In the table forecast for each location, these are highlighted in red.