Local 3-Month Temperature Outlook

PUBLIC FACT SHEET

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What is the Local 3-Month Temperature Outlook (L3MTO)?

The L3MTO product provides probabilistic local forecasts of 3-month average daily mean temperatures for thirteen consecutive 3-month periods (January-February-March (JFM), February-March-April (FMA), etc.). Corresponding lead times are from 0.5 months to 12.5 months. The L3MTO is available for approximately ten sites in each National Weather Service (NWS) Weather Forecast Office (WFO) County Warning Area (CWA), or about 1150 stations nationwide. This product extends the Climate Prediction Center's (CPC) national 3-Month Temperature Outlook to specific local sites, and is released simultaneously with the national product on the 3rd Thursday of every month.

The L3MTO is available in several formats: tables, text discussions, and graphical outputs, such as Pie Charts, Temperature Range Graphs, and Probability of Exceedance (POE) curves. A link to an Outlook Evaluation Tool is also included, for a statistical evaluation of forecast accuracy.

What are the Benefits of the L3MTO?

1) Provides more spatial detail, or higher resolution outlooks

2) Includes multiple presentation formats to accommodate a wide range of user needs

3) Includes helpful resources for interpretation

4) Extends the national outlook to the local level, greatly enhancing the product's exposure and its value for local users

Where are the L3MTO and related features found?

The L3MTO can be accessed from all WFO web pages by selecting the "Climate Prediction" tab. The local outlooks can also be reached from **http://www.weather.gov/climate/l3mto.php** either by clicking on the area of interest on the national map or by using the search function below the map.

Every "Local Outlook" page features a map showing stations for which forecasts are available in the WFO area. The L3MTO Pie Chart displayed corresponds to the station shown in red on the map. To view the forecast data in tabular form, choose "Outlook Table" on the "Select Product" menu or click on the "Outlook Table" icon. To view the forecast for another location, select the station either by clicking on the map or by choosing it on the "Select Location" menu.

How is the L3MTO produced?

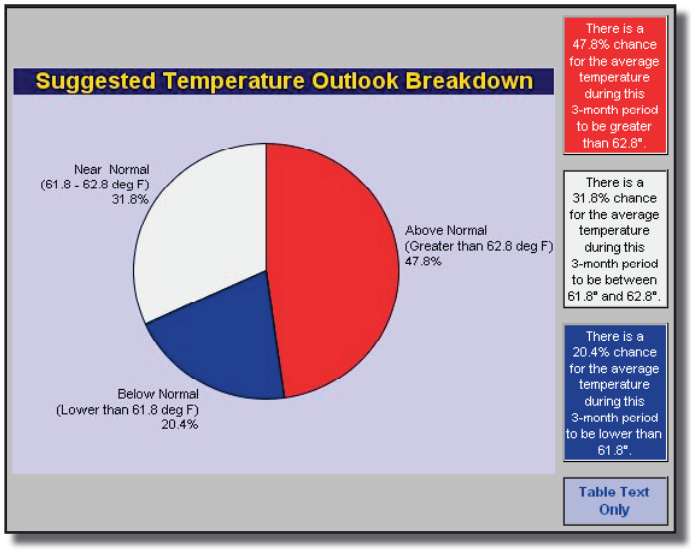
A method of statistical downscaling is used to translate the CPC national 3-Month Temperature Outlook into Local 3-Month Temperature Outlooks for about 1150 individual stations.

How to Interpret the L3MTO products?

The L3MTO is available in three graphical formats of increasing complexity. Pie Charts are the most basic, while the Temperature Range Graphs and Probability of Exceedance (POE) curves offer more sophisticated ways to view the outlooks. Each of the graphical formats is associated with helpful features, such as data tables and/or interpretive text. All of the L3MTO products were developed using climate data from a 30-year reference period, 1971-2000.

L3MTO Pie Chart

The L3MTO Pie Chart is the simplest of the product formats. It shows the expected chance for the 3-month temperature to occur in each of three categories: Above Normal, Near Normal, and Below Normal. The larger the pie slice, the higher the chance of occurrence. A legend, located to the right of the pie chart, has three corresponding rectangles that show the actual 1971-2000 temperature values used to define the forecast categories.



L3MTO Pie Chart

Special Case: When There is No Forecast

Under certain conditions, the methods and tools employed in the forecast process cannot produce a reliable outlook product. In these cases, there is effectively no forecast, and the "outlook" coincides with the climatological information from the 1971-2000 reference period. For the Pie Chart, this case is indicated when all three slices of the pie are shown to be about the same size.

Where to find more information on the L3MTO?

Please contact your local Weather Forecast Office for more information on the L3MTO product and its interpretation.