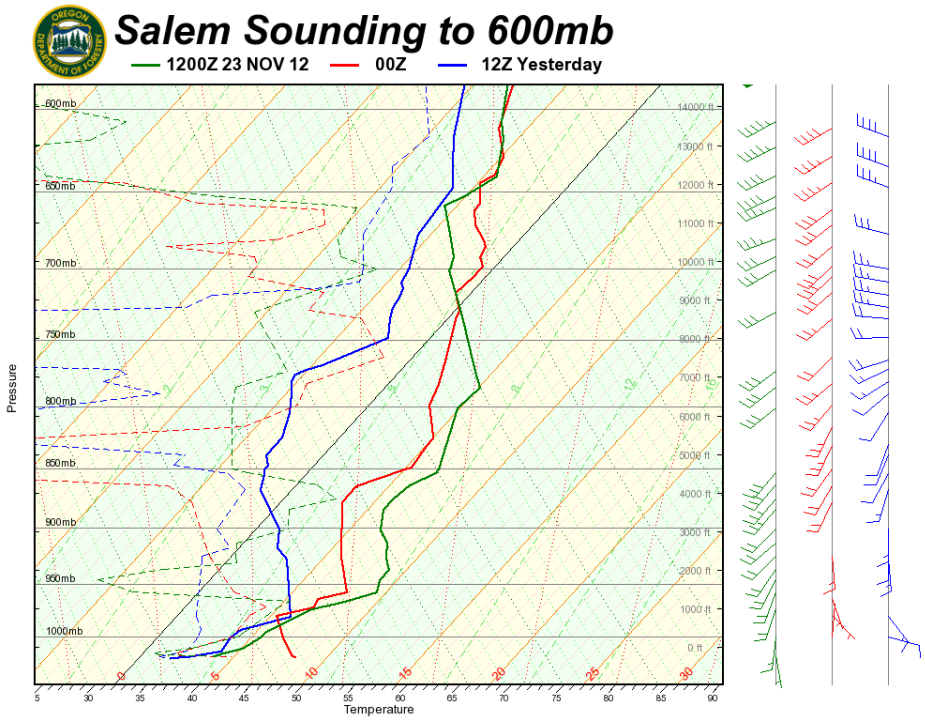
Skew-T Plots

The Need: The Oregon Department of Forestry's Smoke Management Program is responsible for authorizing forest management prescribed burning so as to minimize smoke impacts in accordance with Oregon's State Implementation Plan under the Federal Clean Air Act. Knowing low-level wind flow is essential to providing accurate forecasts to forest management personnel in the field. Winds are measured by rawinsonde and traditionally plotted on a Skew-T Log-P thermodynamic diagram. Skew-T diagrams are available from numerous locations on the Internet. However, they are traditionally plotted to a level of 100 millibars. This means the area of interest to ODF forecasters – low-level winds and low-level temperature profile – is only about 10 percent of the chart near the bottom. The Skew-T charts available online were of only limited utility in the forecasting process.

The Solution: Weather NorthWest developed low level Skew-T charts for the Oregon Department of Forestry that extended to approximately 600 millibars, allowing forecasters to focus on important low-level atmospheric details. The total solution included scripts to download raw sounding data from the Internet, plot soundings to various levels, and save and print the results. Forecasters now have a much better visual picture of *low-level* conditions for improved forecasts and instructions to burn bosses and field personnel involved with prescribed silviculture burning.



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