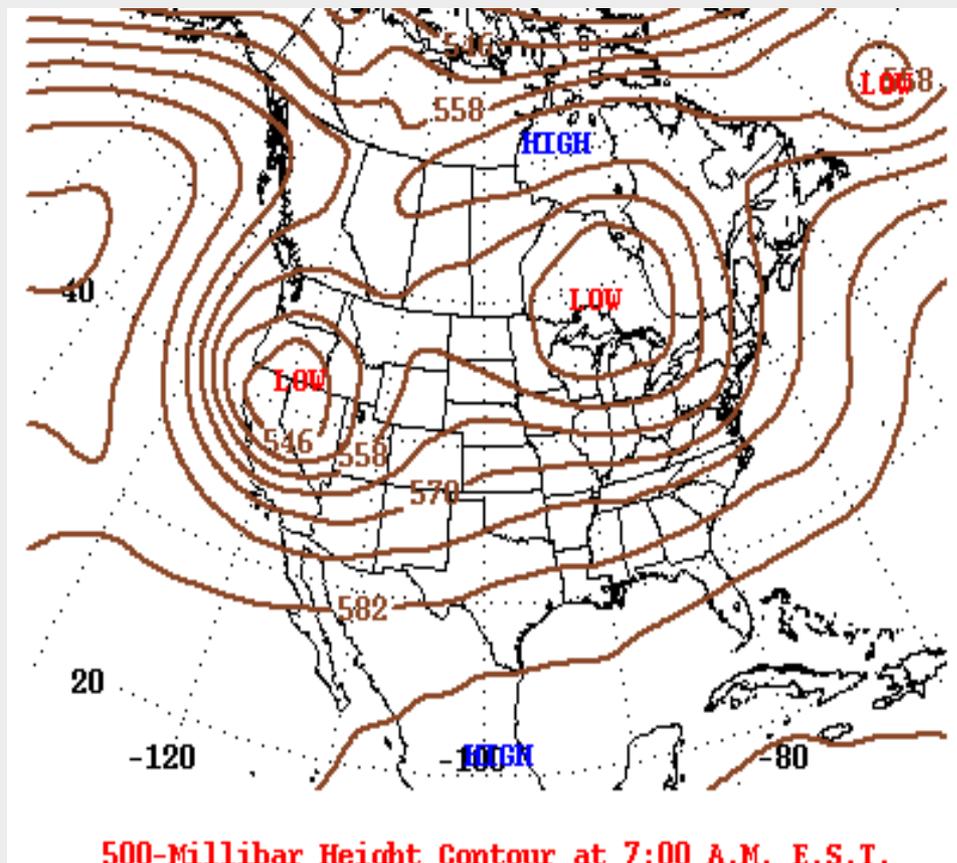


The "Dirty Snow" Storm of October 3-4, 2009

Summary A low-pressure system brought an unseasonably cold air mass out of British Columbia into the Pacific Northwest over the weekend of October 2-4, 2009. The system created heavy rain and, for several elevations above 4000 feet MSL, heavy snow. In the Yakima valley there were damaging winds Saturday night; the Yakima Fire Department responded to fourteen wind-related incidents from 11:30 pm Saturday to 5:15 am Sunday. Several of the incidents were fires started by trees falling across power lines. An unusual aspect of the storm was blowing dust transported Sunday from eastern Washington into central Oregon, where it mixed with snowfall to create "dirty snow".

The map below shows the weather pattern (500mb height contours) at 5 pm on Saturday Oct. 3. The "L" indicates the center of a low-pressure weather system centered over eastern Oregon. Across the higher terrain of central and northeast Oregon precipitation began Saturday morning; by evening 4 inches of snow had accumulated at Joseph, OR and 5 inches at Tollgate, OR. By late Sunday morning 11 inches had accumulated in the Ochoco Meadows (5430 ft MSL) near Mitchell, OR and 4 to 8 inches had accumulated in Bend, OR. Several lower-elevation locations recorded record rainfall for the 24-hour period ending October 4, 2009. STATION PREVIOUS NEW RECORDS RECORD/YEAR RECORD BEGAN
*CONDON, OR 0.34 / 2002 0.74 1928 *COVE, OR 0.21 / 1998 0.42 1917 *HEPPNER, OR 0.30 / 1946 0.56 1928
*JOSEPH, OR 0.06 / 2002 1.46 1893 *MITCHELL, OR 0.23 / 2002 1.30 1949 *PELTON DAM, OR 0.09 / 1998 0.28 1958
*PENDLETON(CITY), OR 0.16 / 1995 0.42 1890 *BICKLETON, WA 0.21 / 2002 0.24 1931 *KENNEWICK, WA 0.10 / 2008 0.35 1948
*SATUS PASS, WA 0.30 / 2006 1.37 1956 *WHITMAN MISSION, WA 0.32 / 2008 0.92 1962



An unusual aspect of the storm was blowing dust transported Sunday from eastern Washington into central Oregon. Residents in Bend, OR reported "dirty snow" as the dust that originated in eastern Washington was collected and carried to the ground by falling snow. The visible satellite image below shows the dust at noon on Sunday being transported by northeast winds from eastern Washington to central Oregon. Residents in Redmond, OR reported that after the rain evaporated it left behind dirt on cars and other surfaces. The dirt was created by the dust that had been brought to the surface by rain during the storm.

