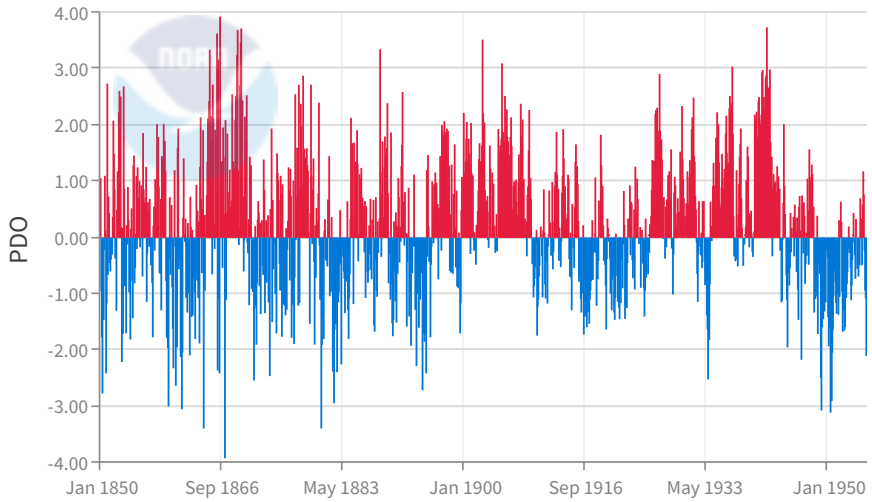
October Global Release: Thu, Nov 12, 2026, 11:00 AM EST

Pacific Decadal Oscillation (PDO)

January 1850-October 2026



Source: https://www.ncei.noaa.gov/pub/data/cmb/ersst/v5/v6/index/ersst.v6.pdo.c

Click and drag to zoom. Right click for more options.

View Data

The Pacific Decadal Oscillation (PDO) is often described as a long-lived El Niño-like pattern of Pacific climate variability (Zhang et al. 1997). As seen with the better-known El Niño/Southern Oscillation (ENSO), extremes in the PDO pattern are marked by widespread variations in the Pacific Basin and the North American climate. In parallel with the ENSO phenomenon, the extreme phases of the PDO have been classified as being either warm or cool, as defined by ocean temperature anomalies in the northeast and tropical Pacific Ocean. When SSTs are anomalously cool in the interior North Pacific and warm along the Pacific Coast, and when sea level pressures are below average over the North Pacific, the PDO has a positive value. When the climate anomaly patterns are reversed, with warm SST anomalies in the interior and cool SST anomalies along the North American coast, or above average sea level pressures over the North Pacific, the PDO has a negative value (Courtesy of Mantua, 1999).

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The NCEI PDO index is based on NOAA's extended reconstruction of SSTs (ERSST). It is constructed by regressing the ERSST anomalies against the Mantua PDO index for their overlap period, to compute a PDO regression map for the North Pacific ERSST anomalies. The ERSST anomalies are then projected onto that map to compute the NCEI index. The NCEI PDO index closely follows the Mantua PDO index.

References

Mantua, N.J. 1999: The Pacific Decadal Oscillation. A brief overview for non-specialists, *Encyclopedia of Environmental Change*.

Yuan Zhang, John M. Wallace, and David S. Battisti, 1997: ENSO-like Interdecadal Variability: 1900-93. *J. Climate*, **10**, 1004-1014. DOI: 10.1175/1520-0442(1997)010<1004:ELIV>2.0.CO;2