

## Winter Precipitation Frequency of the North American West Coast from Historical Records

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Precipitation frequency was reconstructed using data from 40 stations of the North American West Coast extending from Sitka, AK to Yuma, CA, and dating back to the mid-nineteenth century. Daily instrumental meteorological data provide the framework for designating locations to derive continuous time series. Documentary data provided very important supplementary information to the instrumental record, which include newspapers, daily diaries, and US and UK Navy log books. All of the data were carefully screened and tested concerning data quality such as in homogeneity, discontinuities, and poor instrument exposures. The modern (20<sup>th</sup> century) record consisted of data from the Historical Climate and COOP Networks, and regionalization of precipitation was conducted through a factor analysis approach. Time series of different seasonal precipitation regimes (NDJ, DJF, and JFM) were compiled for each region, aided by regression analyses. Extreme seasonal and daily events were also reconstructed, including the spatial patterns, and compared with modern climate normals. Results also provided insight on relationships with North Pacific forcing mechanisms and teleconnections at interannual and decadal timescales.