

CNA GACIR Rain Gage Network
Prepared Description of the Data Set
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The Mexican government maintains a wide network of climate stations across the country. By the late 1970s this network was composed of more than 5,000 stations. The total number of stations in the network has gradually shrunk due to normal attrition of stations and due to budget cuts which have prevented the opening of replacement stations. A majority of climate stations only record daily 24 hour precipitation amounts, with less than 40% of the sites also reporting daily maximum and minimum temperature. The nationwide climate network is primarily supported by the Mexican Meteorological Service (Servicio Meteorologico Nacional, SMN), the Mexican Water Commission (Comision Nacional de Agua, CNA) or local county and state government agencies (Delegaciones). Reading are standardized to be taken at 08:00LST each morning. All equipment is standard WMO equipment.

The NAME precipitation data set presented in these archives is called the GASIR data set and it is maintained by the CNA. Reporting of data is very poor on the weekends and data is often missing when observers are away from their post. The CNA has a relatively active ongoing effort to recover missing data after the cutoff time for the morning reports. The CNA officially closes the monthly rainfall data set 6 months after the end of the month.

In contrast the SMN daily operational rainfall product (which NCEP ingests) often shows data gaps due to problems with weekend reporting or due to problems with data not being received from particular regional CNA offices. The latter problem arises when a regional office fails to transmit its rainfall reports to the central office in Mexico City. As the SMN daily rainfall report is prepared each morning, late data is frequently not reentered into the data files on a consistent basis. Instead, the SMN chooses to replace its operational rainfall data set with the GASIR data set approximately one to two months after the close of the month.

A final cautionary note needs to be added about missing data that may be erroneously indicated with a “0” rather than a blank. We have found that the SMN operational data set shows a dry bias country wide because many of the regional collecting agencies will place a “0” into a station report that actually was missing. This inconsistency has been a real problem in past years, but the state agencies working with the SMN have tried to differentiate between missing rainfall reports versus a station actually reporting no precipitation. Again, the CNA data set appears not to suffer as much from this problem as does the SMN operational product. The use of the “0” for missing data apparently developed out of a need for a “place holder” in data sets that were used with older computer software programs at the SMN.