

**NAME Supported HOBO Temperature and Humidity Stations in Western Mexico
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A series of 14 Onset HOBO Temperature and Humidity recorders were placed across western Mexico (Figure 1). These 14 select sites are co-location with the NAME tipping bucket rain gages maintained by Dr. Gochis of UCAR. Dr. Gochis and Dr. Watts were in charge of placing the instruments and in retrieving the data.

The META DATA for the sites are shown in Table I. It should be noted that these specific sites were chosen because they are official climate reporting stations of the Mexican Meteorological Service (The Servicio Meteorological Nacional (SMN)). These SMN sites routinely record daily maximum and minimum temperature and daily 24hr total rainfall. The HOBO event recorders were placed directly in the SMN instrument shelters which are standard WMO shelters.

The sensors measure or calculate temperature, relative humidity, dew point and specific humidity. The recorders have been set to take observations every 30 minutes. At this setting, the data must be retrieved from the loggers about every 200 days. Battery life of the instruments is expected to be about 3 years. The data loggers that were purchased are a high end item designed for outdoor use, though additional protection from water and airborne chemicals is advised. We believe the instrument shelters will give the necessary protection for the instruments.

The recorders were placed into operation in mid to late June 2004. The first retrievals of data were made in October through December 2004. We expect the stations to be operational through the summer of 2006 and this will give NAME two more years of monsoon data for these sites. We plan to turn over the data array to the SMN for them to continue to operate until the instruments fail.

Specifications for the Onset Company's Hobo Event Recorders Temperature and Humidity

HOBO Pro RH/Temp Data Logger Part # H08-032-08

Part # H08-032-IS (Intrinsically Safe)

Two-channel logger with internal temp and relative humidity (RH) sensor* **Key**

Specifications • Temperature Measurement Range: -30° to 50°C (-22° to 122°F)

• Temperature Accuracy: $\pm 0.2^{\circ}$ at 21°C ($\pm 0.33^{\circ}$ at 70°F)

• RH Measurement Range: 0% to 100% RH

• RH Accuracy: $\pm 3\%$ RH; $\pm 4\%$ RH in condensing environments * RH sensor is designed for use in outdoor environments with cyclical high- and low-humidity level. Intermittent condensation permitted only when temperatures are less than 30°C (86°F). Operation outside stated limits, or repeated sensor saturation, will lead to premature sensor failure. RH sensor requires protection from rain, splashing, mist, and airborne chemicals such as salt and ammonia.

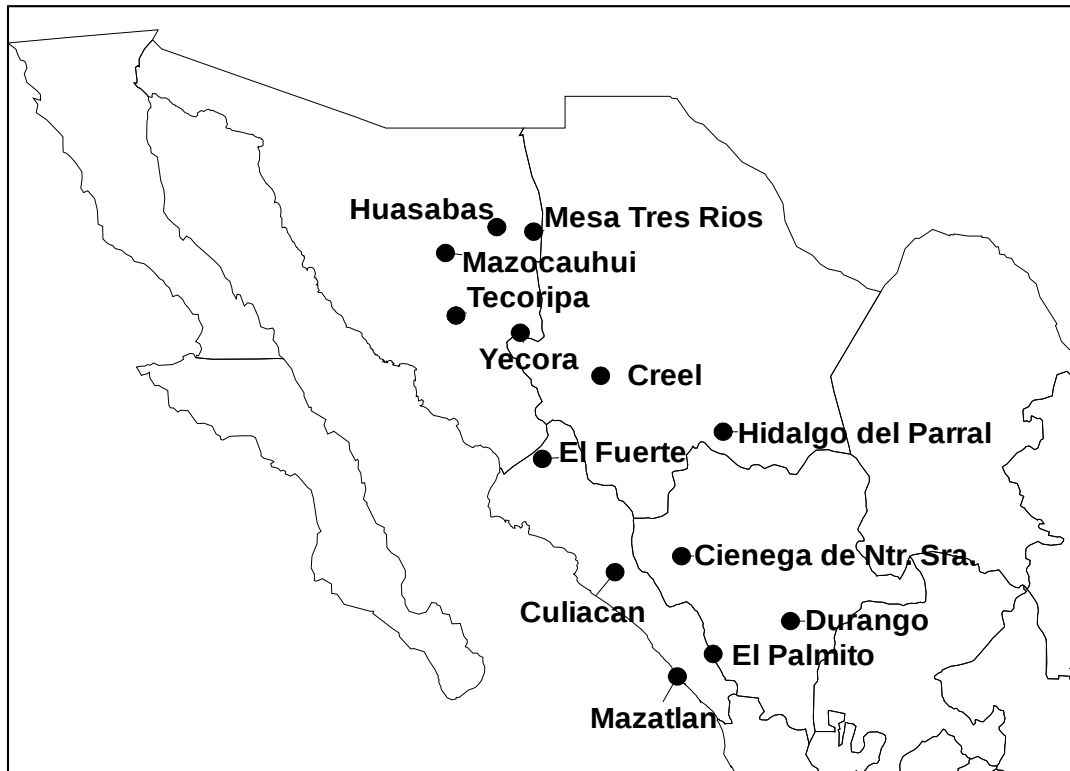


Figure 1. Location of Hobo sensors deployed for the NAME experiment. The Hobo instruments have been placed in SMN instrument shelters. Temperature, dew point, relative humidity and specific humidity are available from the sensors at 30 minute intervals.

STATION	STATE	Lat	Lon	Alt.
Hidalgo del Parral	CHIHUAHUA	26.91	-106	1775
Creel	CHIHUAHUA	27.74	-108	2347
Durango	DURANGO	24.06	-105	1872
Cienega de Ntra. Sra	DURANGO	25.05	-106	2483
Mazatlan	SINALOA	23.22	-106	2
El Palmito	SINALOA	23.56	-106	1925
Culiacan	SINALOA	24.81	-107	66
El Fuerte	SINALOA	26.51	-109	133
Yecora	SONORA	28.37	-109	1543
Tecoripa	SONORA	28.63	-110	402
Mazocauhui	SONORA	29.54	-110	486
Mesa Tres Rios	SONORA	29.85	-109	1899
Huasabas	SONORA	29.91	-109	519

Table I. META data files for the 13 Hobo Temperature Humidity sensor sites in western Mexico. The 14th data logger at the El Palmito, Durango site was mistakenly set to take readings every 12 seconds. Consequently, the logger for this site exceeded its data storage capability shortly after the sensor was launched. This error was corrected during the fall 2004 visit and thus, this site should be operational for the summers of 2005 and 2006.