



Winning poster from
Dominica's World
Meteorological Day student
poster competition
(Dominica Meteorological
Service)

WMO Region IV

National Climate Monitoring Products
Deke Arndt, USA/NOAA

WMO Region IV

- Many different countries and climate regimes
- Large continental nations, young island nations, tropical to polar climates



Various products

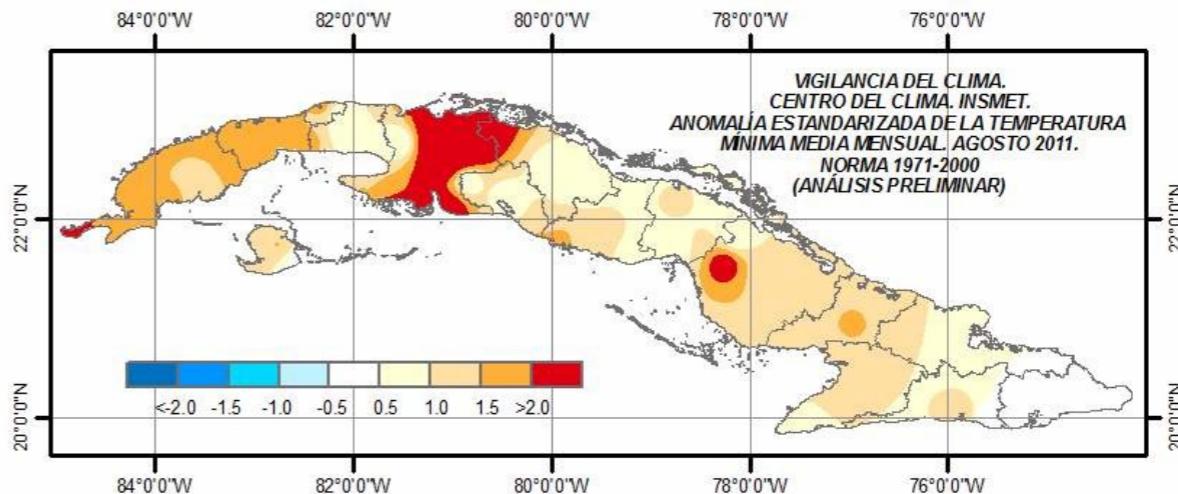
Member	National product	Data type	Interval	Pd of record / base pd	Latency / revised?	Report?	Map?	Table?	Graph?	Lang
Antigua & Barbuda	Temperature	1 Stn	M, A	1971-pr	Varies	Y	N	Y	Y	En
Antigua & Barbuda	Precipitation (Antigua)	Several stns	M, A	1929-pr	Varies	Y	N	Y	Y	En
Belize	Monthly summary	Assessment	M	NA	Unknown	Y	N	N	N	En
Canada	Precipitation	~470 stns, gridded	Season	1948-pr / 1961-90	~15 days / ~3 months	Y	Y	Y	Y	En, Fr
Canada	Temperature	~330 stns, gridded	Season	1948-pr / 1961-90	~15 days / ~3 months	Y	Y	Y	Y	En, Fr
Cuba	Drought / precip	Stn data	Month	1960-pr / 1971-2000	Days / ??	Y	Y	Y	Y	Es
Cuba	Temperature	Stations	M	1960-pr / 1971-2000	Days / ??	Y	Y	Y	Y	Es
Dominican Republic	Precipitation	Stn data?	M	Unknown	Unknown	Y	N	N	N	Es
El Salvador	Precipitation	Stn data?	M	Unknown / 1971-2000	Unknown	Y	Y	N	N	Es
El Salvador	Temperature	Stn data?	M	Unknown / 1971-2000	Unknown	Y	Y	N	N	Es
Jamaica	Precipitation	Stn data	M	Unknown / 1971-2000	Unknown	Y	Y	Y	N	En
Jamaica	Drought	Pct normal (similar to AUS)	M	Unknown / 1971-2000	Unknown	Y	Y	Y	N	En

Various products

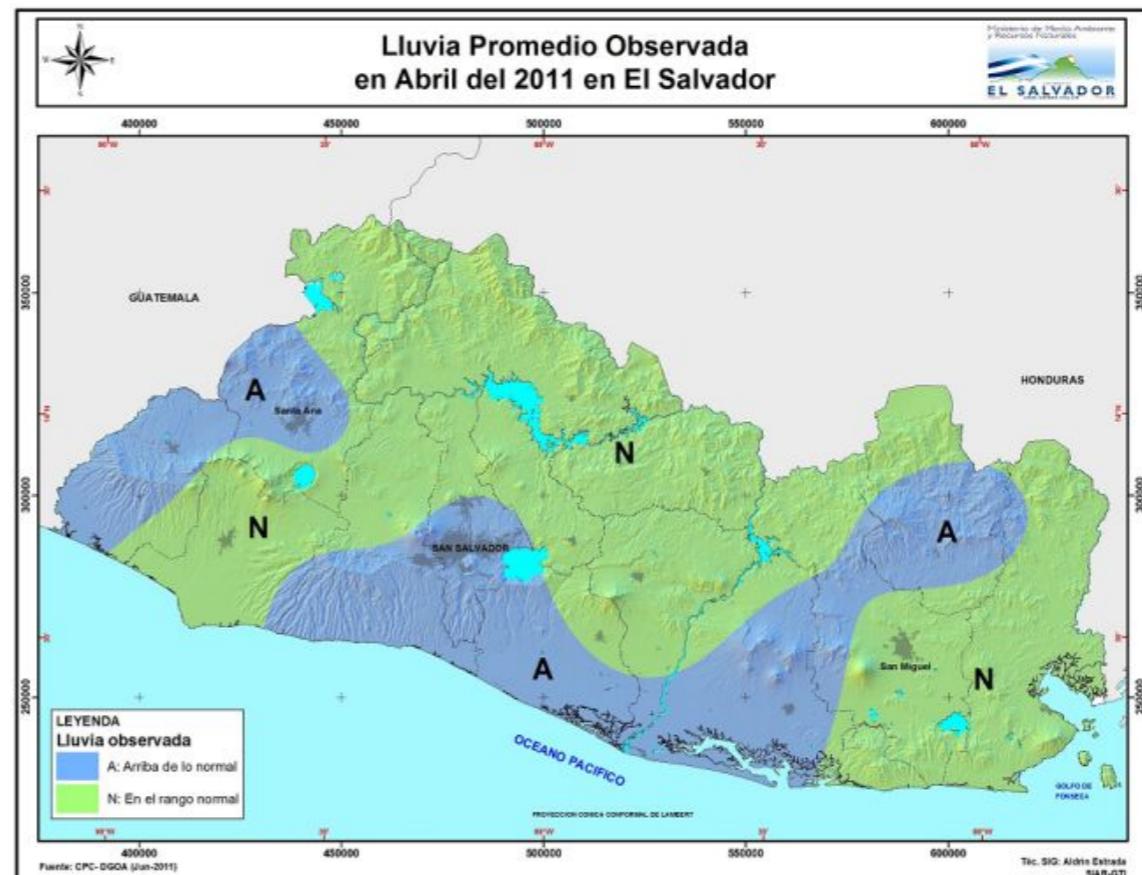
Member	National product	Data type	Interval	Pd of record / base pd	Latency / revised?	Report?	Map?	Table?	Graph?	Lang
Mexico	Drought	Assessment	Month	2002-pr / NA	~2 weeks	Y	Y	N	N	Es
Mexico	Precipitation	Stations	Month	1941-pr / 30 year averages	~2 weeks	Y	Y	N	Y	Es
Mexico	Temperature	Stations	Month	1941-pr / 30 year averages	~2 weeks	Y	Y	N	N	Es
USA	US drought monitor	Assessment	Week	2000-pr / NA	2 days / No	Y	Y	Y	Y	En
USA	Temperature	1,218 stns	W, M, Q, A	1895-pr / 1901-2000	~5 days / ~ 3 months	Y	Y	Y	Y	En
USA	Wind	Reanalysis	M	1950-pr / 1971-2000	~5 days	N	Y	N	N	En
USA	Precipitation	1,218 stns	W, M, Q, A	1895-pr / 1901-2000	~5 days / ~ 3 months	Y	Y	Y	Y	En

Some mapping examples

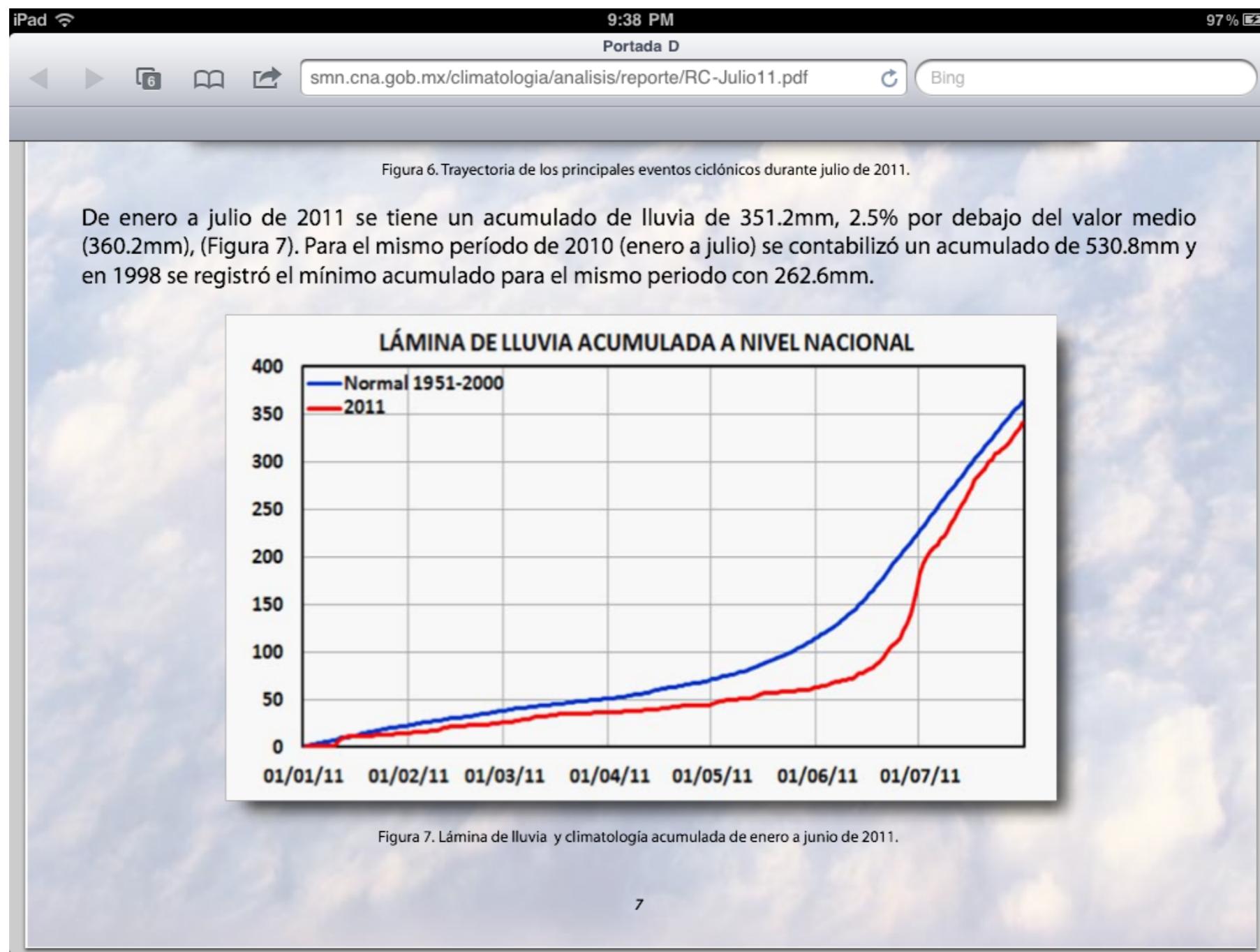
- Minimum temperatures in Cuba, august 2011



Precipitation in El Salvador, April 2011



Graphing precipitation

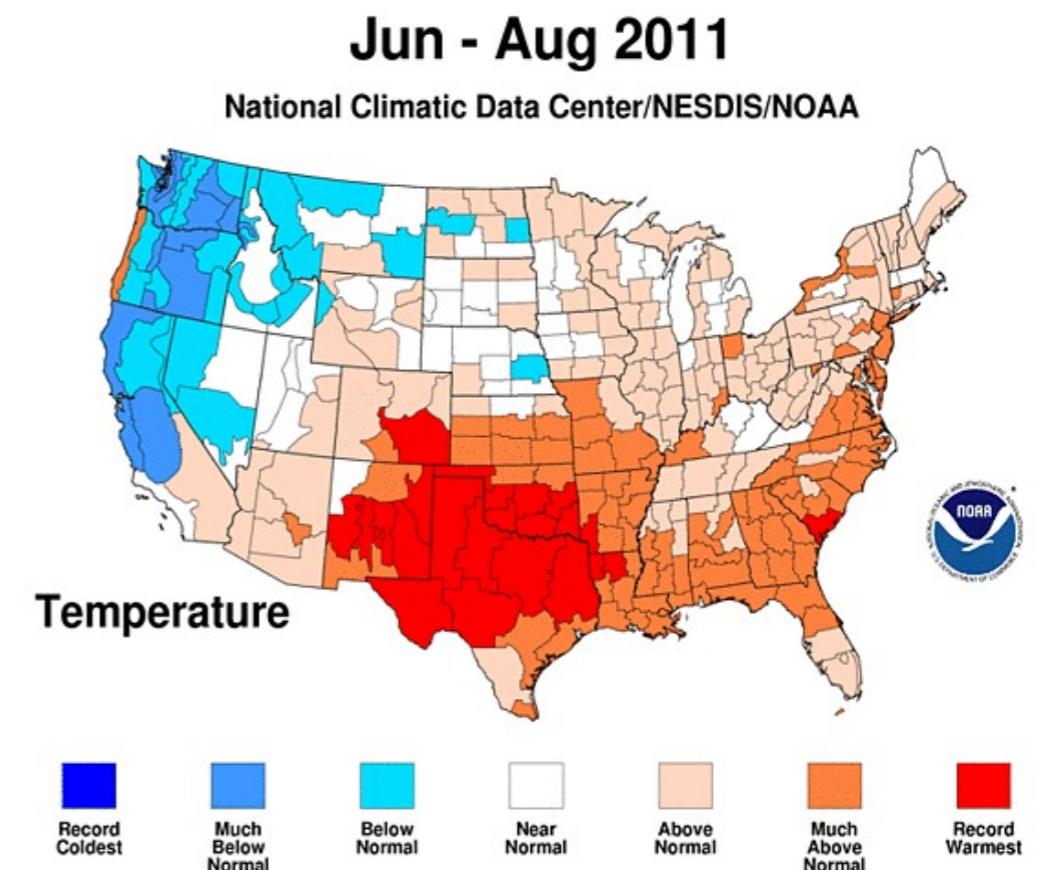


Base periods

- Most countries use 30-year
 - 1971-2000 most common
 - Several refer to 1961-1990
- USA converts to 20th century average

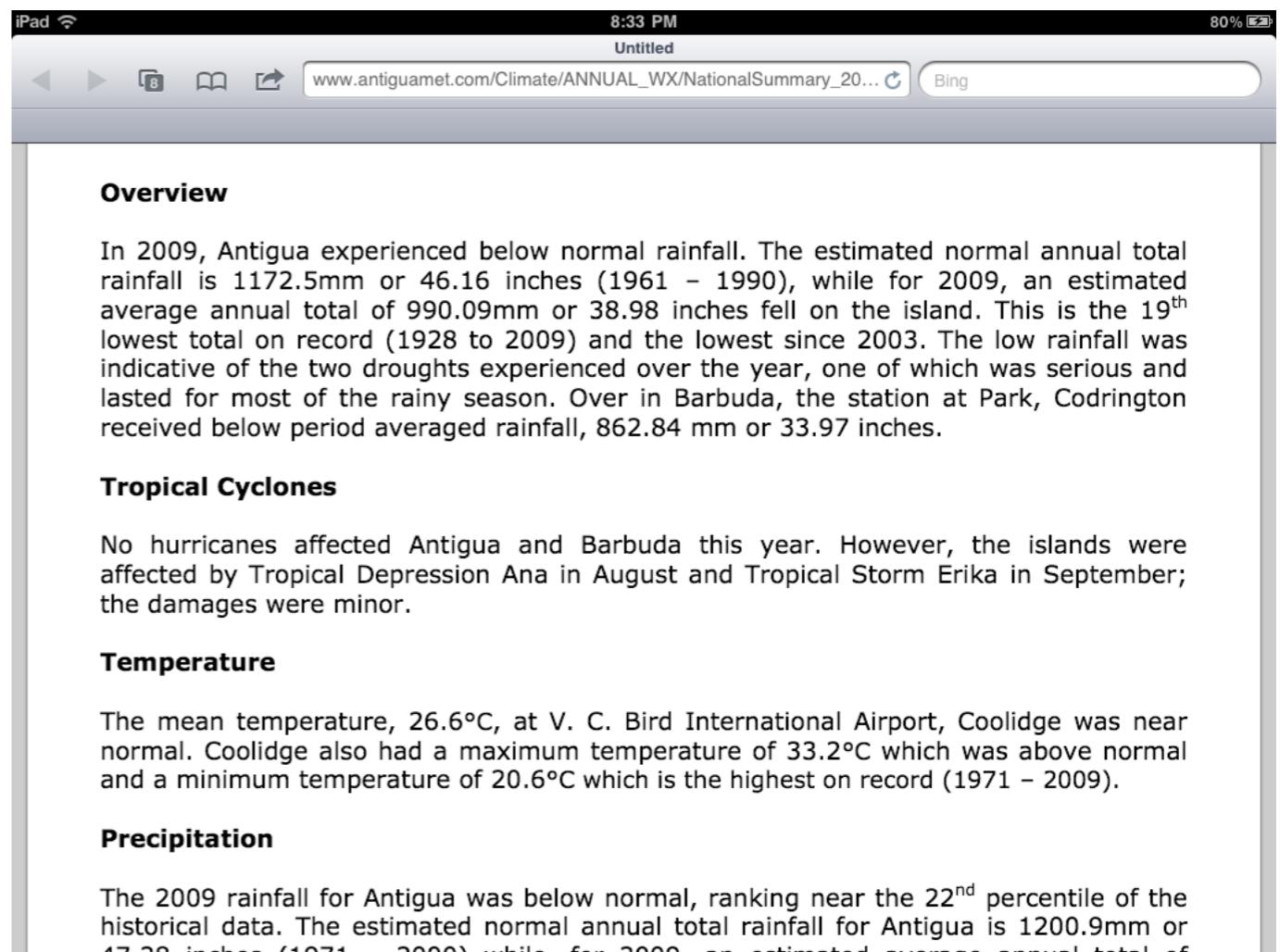
Defining above/below normal

- Antigua & Barbados,
USA
 - Above / Near / Below = terciles
 - "Much" Above / Below = top/
bottom 10%



Types of data

- Larger countries tend to use some aggregate of stations
- Smaller, island nations may use a single station as a estimate of national value



The screenshot shows a web browser on an iPad displaying a climate summary for Antigua. The page is titled "Overview" and contains the following text:

In 2009, Antigua experienced below normal rainfall. The estimated normal annual total rainfall is 1172.5mm or 46.16 inches (1961 – 1990), while for 2009, an estimated average annual total of 990.09mm or 38.98 inches fell on the island. This is the 19th lowest total on record (1928 to 2009) and the lowest since 2003. The low rainfall was indicative of the two droughts experienced over the year, one of which was serious and lasted for most of the rainy season. Over in Barbuda, the station at Park, Codrington received below period averaged rainfall, 862.84 mm or 33.97 inches.

Tropical Cyclones

No hurricanes affected Antigua and Barbuda this year. However, the islands were affected by Tropical Depression Ana in August and Tropical Storm Erika in September; the damages were minor.

Temperature

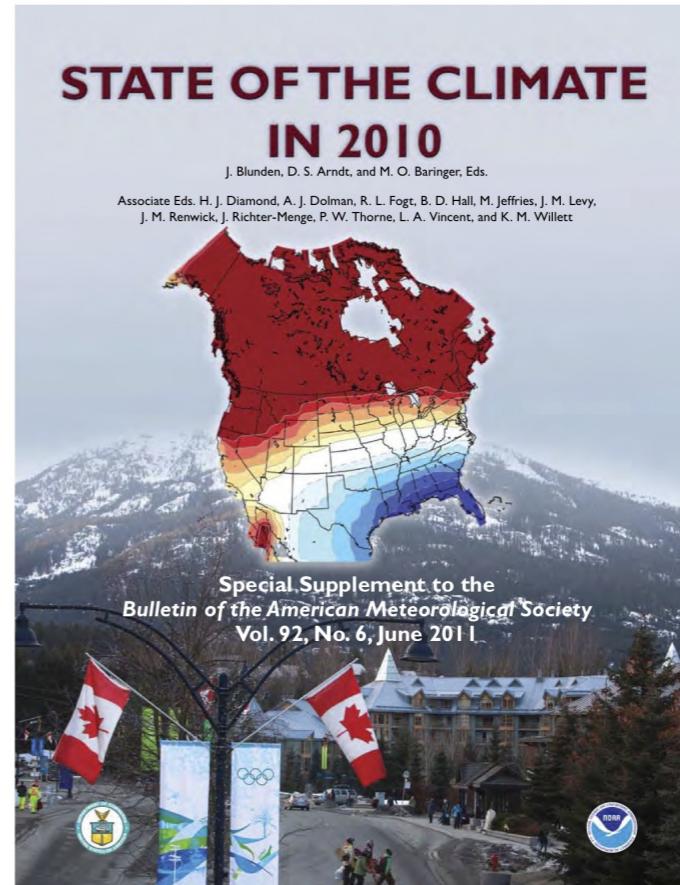
The mean temperature, 26.6°C, at V. C. Bird International Airport, Coolidge was near normal. Coolidge also had a maximum temperature of 33.2°C which was above normal and a minimum temperature of 20.6°C which is the highest on record (1971 – 2009).

Precipitation

The 2009 rainfall for Antigua was below normal, ranking near the 22nd percentile of the historical data. The estimated normal annual total rainfall for Antigua is 1200.9mm or 47.28 inches (1971 – 2000) while for 2009 an estimated average annual total of

Other observations

- There is very little coordinated effort to present superlatives for a period
- Warmest place, greatest rainfall, strongest wind of July 2011



This potentially valuable item was proposed for uniform inclusion in *BAMS State of the Climate*. More information later today



Thank you
From WMO Region IV