



FLORIDA KEYS

National Weather Service

Forecast Office

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COLDEST FEBRUARY IN THREE DECADES AND 4TH COLDEST ON RECORD COLDEST JANUARY-FEBRUARY PERIOD FOR KEY WEST IN THREE DECADES 2ND WETTEST FEBRUARY IN FIVE DECADES AND 7TH WETTEST SINCE 1871

THE AVERAGE MONTHLY TEMPERATURE THIS PAST FEBRUARY WAS 64.7 DEGREES FAHRENHEIT AT KEY WEST INTERNATIONAL AIRPORT AND 64.6 DEGREES AT THE FLORIDA KEYS MARATHON AIRPORT...6.1 AND 6.5 DEGREES BELOW NORMAL RESPECTIVELY. LAST MONTH WAS COLD ENOUGH TO TAKE THE REIGNS FOR THE COLDEST FEBRUARY IN THIRTY YEARS FOR KEY WEST. THIS ALSO RANKS AS THE FOURTH COLDEST FEBRUARY AT THE END OF THE OVERSEAS HIGHWAY SINCE RECORDKEEPING BEGAN...BACK IN 1873. THE COLDEST ON RECORD WAS 1978...WHEN THE MONTHLY AVERAGE WAS JUST 63.1 DEGREES.

FEBRUARY MAY HAVE BEEN AN IMPRESSIVELY COLD MONTH IN AND OF ITSELF BUT WITH JANUARY ALSO COOLER THAN NORMAL THEY DOMINATE AS THE COLDEST START TO A YEAR IN OVER THIRTY YEARS. AVERAGE TEMPERATURES FOR JANUARY-FEBRUARY WERE 64.4 DEGREES IN KEY WEST AND 64.1 DEGREES IN MARATHON. THESE AVERAGES ARE 6.2 AND 6.0 DEGREES BELOW NORMAL FOR KEY WEST AND MARATHON...RESPECTIVELY. WHILE RECORDS ARE NOT YET TRACKED FOR MARATHON DUE TO THE SHORTER PERIOD OF OBSERVATIONS...FOR KEY WEST THIS AVERAGE TIES WITH JANUARY-FEBRUARY 1958 AS THE SECOND COLDEST SINCE 1873. JANUARY-FEBRUARY 1978 RETAINS THE TITLE OF COLDEST ON RECORD WITH AN AVERAGE TEMPERATURE OF 63.7 DEGREES.

LOOKING AT THE DECEMBER-JANUARY-FEBRUARY (DJF) PERIOD...THE AVERAGE TEMPERATURE OF 67.5 DEGREES WAS 3.4 DEGREES BELOW THE NORMAL OF 70.9 DEGREES. THIS IS OF SIGNIFICANCE CONSIDERING THE THREE MONTH PERIOD BEGAN WITH DECEMBER 2009 AVERAGING 1.4 DEGREES ABOVE NORMAL. THE DJF PERIOD ENDING IN 2010 RANKS AS THE SECOND COLDEST IN THREE DECADES...THE COLDEST IS 1981 WHEN THE AVERAGE TEMPERATURE WAS 66.2 DEGREES. SINCE 1873 THE COLDEST DJF PERIOD ON RECORD IS THE AVERAGE OF 65.3 DEGREES IN 1885-1886...2009-2010 RANKS AS THE NINTH COLDEST.

WHILE TEMPERATURES MAY HAVE MADE A MORE NOTICEABLE DIFFERENCE TO RESIDENTS... RAINFALL TOTALS RANGED FROM AROUND TWO INCHES TO OVER SEVEN AND A HALF INCHES THROUGHOUT THE KEYS LAST MONTH...WITH ALL SITES SHOWING AN INCREASE OVER FEBRUARY 2009.

FEBRUARY RAINFALL AT THE KEY WEST AND MARATHON AIRPORTS WAS A SURPLUS RATHER THAN A DEFICIT...WITH MONTHLY TOTALS OF 4.63 INCHES IN KEY WEST AND 3.64 INCHES IN MARATHON. THESE VALUES ARE 3.12 AND 2.04 INCHES ABOVE NORMAL FOR THE MONTH...RESPECTIVELY. FEBRUARY RAINFALL FOR KEY WEST RANKS 2010 AS THE SEVENTH WETTEST SINCE RECORDKEEPING BEGAN FOR PRECIPITATION IN 1871 AND THE SECOND WETTEST IN THE PAST FIFTY YEARS. THE WETTEST FEBRUARY ON RECORD IS 1872 WHEN 7.19 INCHES OF RAINFALL WAS RECORDED.

RESIDENTS AND VISITORS OF THE KEYS HAVE WONDERED WHY IT HAS BEEN SO COLD LATELY...AND QUITE OFTEN THE BLAME IS SHIFTED TO THE PERSISTENT EL NIÑO CONDITIONS STILL PRESENT IN THE PACIFIC. WHILE EL NIÑO TENDS TO BRING BELOW NORMAL TEMPERATURES AND ABOVE NORMAL RAINFALL TO THE SOUTHEAST THIS IS NOT THE SOLE REASON THE KEYS HAVE EXPERIENCED AN ATYPICAL WINTER SEASON. FACTORS NOT ALWAYS TAKEN INTO ACCOUNT ARE ADDITIONAL LARGE-SCALE ATMOSPHERIC CIRCULATIONS.

THE ARCTIC (AO) AND NORTH ATLANTIC (NAO) OSCILLATIONS ARE TWO SUCH CIRCULATIONS THAT HAVE PLAYED AN INTEGRAL PART IN THIS COLD WINTER WEATHER. THE STRENGTH OF THESE INDICES WHETHER POSITIVE OR NEGATIVE HAS AN IMPORTANT EFFECT ON WEATHER NOT JUST THROUGHOUT THE UNITED STATES OR NORTH AMERICA... BUT ALSO NORTHERN EUROPE. THE AO AND NAO HAVE BEEN IN STRONG NEGATIVE PHASES THROUGHOUT MOST OF THE PAST THREE MONTHS...INDICATED MOST NOTABLY BY LOWER THAN NORMAL PRESSURE OVER THE NORTH ATLANTIC OCEAN. THIS LOWER PRESSURE HAS HELPED SHIFT THE POLAR JET STREAM AND STORM TRACKS FURTHER SOUTH...THUS RESULTING IN A COLDER WINTER FOR MUCH OF THE UNITED STATES.

THIS WINTER WHEN THE JET STREAM DIPPED DOWN OVER THE CENTRAL AND EASTERN UNITED STATES IT ALLOWED COLD AIR FROM CANADIAN AND ARCTIC AIR MASSES TO PENETRATE FURTHER SOUTH THAN NORMAL. A PRIME EXAMPLE OF THIS WAS WHEN A STRONG BLAST OF ARCTIC AIR MADE ITS WAY INTO THE KEYS FROM JANUARY 7 THROUGH 13...BRINGING WITH IT TEMPERATURES IN THE 30S AND LOW-40S.

EVEN THOUGH IT MAY SEEM THAT EL NIÑO HAS NOT BEEN A PRIMARY FACTOR IN THE KEYS THIS WINTER...IT HAS MADE ITSELF KNOWN WITH ABOVE NORMAL RAINFALL RECORDED ALONG THE ISLAND CHAIN. EL NIÑO YEARS ALLOW FOR THE PACIFIC SUBTROPICAL JET STREAM TO EXTEND ACROSS THE GULF OF MEXICO AND FLORIDA. OVER THE PAST THREE MONTHS A NUMBER OF RAINMAKERS HAVE DEVELOPED IN THE GULF AND THEN MOVED ACROSS FLORIDA AND THE KEYS. THESE LOW PRESSURE SYSTEMS WERE AIDED AND STEERED BY THE JET ENERGY OVER THE GULF.

FOR MORE INFORMATION ON EL NIÑO OR AO/NAO PLEASE VISIT NOAA'S CLIMATE PREDICTION CENTER WEBSITE AT [HTTP://WWW.CPC.NOAA.GOV](http://www.cpc.noaa.gov)

BELOW ARE THE PRELIMINARY AVERAGE MONTHLY TEMPERATURES AND RAINFALL TOTALS FOR FEBRUARY ALONG THE KEYS ISLAND CHAIN...COMPARING 2010 TO 2009 AS WELL AS THE DEPARTURES FROM NORMAL VALUES WHERE AVAILABLE.

FEBRUARY AVERAGE TEMPERATURES/DEPARTURE FROM NORMAL IN DEGREES F

Station – Station Type	2010	Dep. fm Normal	2009	Dep. fm 2009
Dry Tortugas National Park – COOP	65.1		68.3	-3.2
Key West WFO – NWS	64.5	-6.3	68.2	-3.7
Key West International Airport – ASOS	64.7	-6.1	67.8	-3.1
Bahia Honda State Park – COOP	64.2		66.5	-2.3
Florida Keys Marathon Airport – ASOS	64.6	-6.5	68.5	-3.9
Curry Hammock State Park – COOP	64.0	-7.1	67.8	-3.8
Duck Key– COOP	64.9	-6.2	67.1	-2.2
John Pennekamp State Park – COOP	64.4		66.6	-2.2

FEBRUARY RAINFALL TOTALS/DEPARTURE FROM NORMAL/2009 IN INCHES

Station – Station Type	2010	Dep. fm Normal	2009	Dep. fm 2009
Dry Tortugas National Park – COOP	4.36		1.56	+2.80
Key West WFO – NWS	4.77	+3.26	0.82	+3.95
Key West International Airport – ASOS	4.63	+3.12	0.65	+3.98
Big Coppitt Key – CoCoRaHS	5.64		0.66	+4.98
Cudjoe Key – CoCoRaHS	7.66		0.76	+6.90
Bahia Honda State Park – COOP	7.26		1.24	+6.02
Florida Keys Marathon Airport – ASOS	3.64	+2.04	2.04	+1.60
Curry Hammock State Park – COOP	4.00	+2.40	2.71	+1.29
Duck Key– COOP	3.51	+1.91	2.55	+0.96
Islamorada – CoCoRaHS	2.79		2.11	+0.68
John Pennekamp State Park – COOP	3.56		0.42	+3.14
Key Largo – CoCoRaHS	2.18		0.74	+1.44

NORMAL VALUES FOR KEY WEST ARE THE AVERAGE OF 1979-2000 AND FOR MARATHON/DUCK KEY THEY ARE THE AVERAGE SPANNING 1982-2004. RECORDS ARE NOT TRACKED FOR MARATHON DUE TO THE SHORT PERIOD OF ASOS DATA.

COLD TEMPERATURES NOT ONLY TOOK HOLD OF THE KEYS AND SOUTH FLORIDA THIS PAST WINTER...DJF FOR THE MAJORITY OF THE CONTINENTAL UNITED STATES WAS ALSO BELOW NORMAL. EXCEPTIONS TO THESE COOLER AVERAGES WERE PARTS OF THE WESTERN UNITED STATES...THE GREAT LAKES REGION...AND THE NORTHEAST. EVEN THOUGH THE UNITED STATES HAD A GENERALLY COOL PERIOD IT IS NO REFLECTION ON THE GLOBAL AVERAGE.

ACCORDING TO THE NATIONAL CLIMATIC DATA CENTER...GLOBAL LAND AND OCEAN TEMPERATURES HAVE BEEN QUITE THE OPPOSITE THIS PAST WINTER...RANKING IN THE TOP TEN WARMEST MONTHS FOR BOTH DECEMBER AND JANUARY. DECEMBER 2009 WAS THE EIGHTH WARMEST DECEMBER ON RECORD AND JANUARY 2010 WAS THE FOURTH WARMEST JANUARY ON RECORD. RECORDKEEPING FOR THE GLOBAL AVERAGE DATES BACK TO 1880. DATA FOR FEBRUARY WILL NOT BE AVAILABLE UNTIL MID-MARCH.

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