CLIMATE SERVICES

LOCAL CLIMATOLOGICAL PRODUCTS

- **Daily Climate Report (CLI):** The CLI provides a summary of past weather conditions.
- **Preliminary Climatological Data (CF6):** A summary of daily data for a month
- **Monthly Climate Report (CLM):** Provides a summary of the climatological parameters for the previous months weather.
- **The Record Report (RER):** For record breaking events, most commonly max and min temp and precipitation.
- **Regional Temperature & Precipitation Summary (RTP):** Daily high & low temps, and precipitation for selected cities.

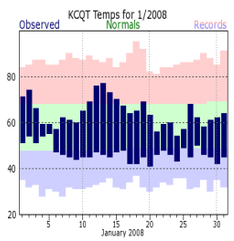
www.weather.gov/climate/index.php?wfo=lox

NOWDATA—NOAA ONLINE WEATHER DATA

- Data query system providing basic preliminary climate statistics.
- Daily and monthly climate data is available for the current and previous years.
- Climate normals are available for 1971– 2000 period and extreme values are available for the period of record.

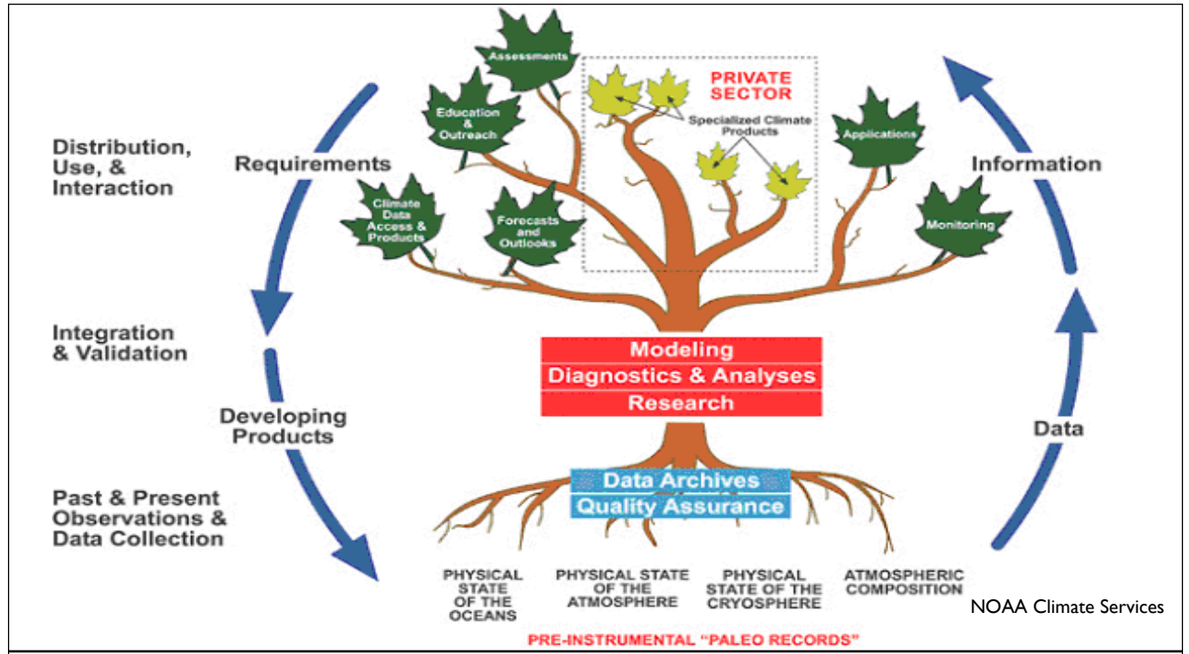
www.weather.gov/climate/xmacis.php?wfo=lox

CLIMATE PLOT GRAPH (CLIPLOT)



The graphs show the observed maximum and minimum temperature, the normal average temperature, and recorded past extreme temperatures for selected cities.

www.wrh.noaa.gov/climate/temp_graphs.php?wfo=lox



NOAA Climate Services

CLIMATE OBSERVATIONAL PROGRAM

- Cooperative Observer Program (COOP) is a climate observing network of people consisting of more than 11,000 volunteers.
- The COOP provides observational meteorological data, consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals.
- Data defines the climate of the United States and helps measure long-term climate changes. Also provides observational meteorological data in near real-time to support forecast, warning and other public service programs of the National Weather Service (NWS).

http://nws.noaa.gov/om/coop/

NOAA NWS CITIZEN SCIENTISTS

NOAA's NWS depends on support from the general public in two key programs:

Skywarn Spotters/Cooperative Observers

•Volunteers provide vital real time observational data. Training is provided and can include warning signs for earthquakes, land slides, and coastal hazards such as tsunamis, water spouts and rip currents.

•SKYWARN Spotters provide information severe local storms and all types of environmental hazards.

www.weather.gov/om/brochures/Citizen_Scientist.pdf

LOCAL 3 MONTH TEMPERATURE OUTLOOK (L3MTO)

- Probabilistic local forecast of 3-month average daily mean temperatures for 13 consecutive 3 month periods.
- Is available in several formats tables, text discussions, graphical outputs, and PROBABITLY of EXCEDENCE (POLE) curve.

www.weather.gov/climate/calendar_outlook.php?wfo=lox

ARCHIVED CLIMATE DATA

- NWS climatological data is archived at the National Climate Data Center (NCDC) and a variety of climate data is available online.
- Official and certified climate data can be retrieved from: http://www.ncdc.noaa.gov/oa/ncdc.html

WESTERN REGION CLIMATE CENTER (WRCC)

- Disseminates high quality climate data pertaining to the western United States.
- Data used in decision-making and applied research related to climate Issues, improving the coordination of climate-related activities at state, regional and national levels.

http://www.wrcc.dri.edu/

LA Climate Tracker

- For historical data research for the Los Angeles area

http://www.wrcc.dri.edu/summary/Climsmsca.html

THE CLIMATE PREDICTION CENTER (CPC)

- Products are operational predictions of climate variability, real-time monitoring of climate data bases, and assessments of major climate anomalies, covering land, ocean, and atmosphere, extending into the stratosphere.

Most popular CPC products:

- 6-14 Day Outlooks
- 30 & 90 day Outlooks
- El Niño/ La Niña Home

http://www.cpc.ncep.noaa.gov/

CLIMATE IN SOUTHERN CALIFORNIA

Southern California is noted for its temperate climate. However there is great diversity across the region! Southern California has three distinct climates: the coastal marine climate, the mountain climate, and the desert climate. These climate divisions could be divided further into other subclimates. For example, the subclimate for Downtown Los Angeles is *Mediterranean.* This climate type is characterized by pronounced seasonal changes in rainfall, a dry summer and a rainy winter but relatively modest transitions in temperature. Sometimes year-to-year variations in our weather patterns occur.

http://www.wrh.noaa.gov/lox/climate/climate_intro.php

YEAR-TO-YEAR CLIMATE VARIATIONS

Climate change is a normal part of the Earth's natural variability. Climate variations are often associated with changes in wind, air pressure, storm tracks, and jet streams on a large regional scale. These fluctuations can lead to conditions which are warmer or colder, wetter or drier, more stormy or quiescent. At times, year-to-year changes in weather patterns are linked to naturally occurring phenomena called **El Niño & La Niña.** http://www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensocycle/clim_vari.shtml

GLOBAL WEATHER CAN BE AFFECTED BY EL NIÑO

- El Niño is not caused by global warming.
- Californians are most familiar with El Niño resulting in increased rainfall during the winter months, most likely during strong El Niño years. These heavy rains occur across the southern tier of the US and Peru.
- Warm water that normally moves toward Indonesia pools off the coast of Peru in the Eastern Pacific. As a result the eastern side of ocean rises in sea level and a depression forms in the western side of the ocean. Rising air forms over the warmer waters in the eastern pacific and rainfall occurs.
- The Western Pacific waters become cooler than usual, rainfall decreases and drought occurs in Indonesia. Australia may be affected by drought as well resulting in devastating brush fires.

http://www.ncdc.noaa.gov/oa/climate/severeweather/extremes.html

DROUGHT is a normal, recurrent feature of climate. Defining drought is rather difficult, as it depends on differences in regions, needs, and disciplinary perspectives.

http://www.drought.noaa.gov/

	EL NIÑO	LA NIÑA
What is it?	A large-scale ocean-atmosphere climate phenomenon linked to a periodic warming in sea-surface temperatures across the central and east-central equatorial Pacific.	The periodic cooling of ocean surface temperatures in the central and east-central equatorial Pacific.
Which phase in the El Niño/ Southern Oscillation (ENSO) cycle?	El Niño is the warm phase. In the U.S. winter temperatures are warmer than normal in the North Central States, and cooler than normal in the Southeast/Southwest. A strong El Niño is often linked to much above normal seasonal rainfall in Southern California.	La Niña is the cool phase. In the U.S. winter temperatures are warmer than normal in the Southeast, and cooler than normal in the Northwest.
Why do they occur? How often?	Changes in ocean surface temperatures affect tropical rainfall patterns and atmospheric winds over the Pacific Ocean. This in turn impacts the ocean temperatures and currents. This occurs every 3-5 years sometimes varying from 2-7 years.	
How long do they last?	9-12 months. Prolonged episodes have lasted 2-4 years.	1-3 years.

http://www.cpc.ncep.noaa.gov/

NWS MISSION

The NWS mission is to provide weather, water, and climate forecasts and warnings for the United States, its territories, adjacent waters, and ocean areas for the protection of life and property, and the enhancement of the national economy.

The National Weather Service (NWS) is a federal agency under the National Oceanic and Atmospheric Administration (NOAA), which is part of the Department of Commerce (DOC).

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NATIONAL WEATHER SERVICE

CLIMATE SERVICES

WEATHER FORECAST OFFICE

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