

*Climate Whiplash!  
From Super Drought  
To XXL El Niño*









***It's a Super  
Drought!***





*Here Comes  
XXL El Niño!*

*It's a Super  
Drought!*



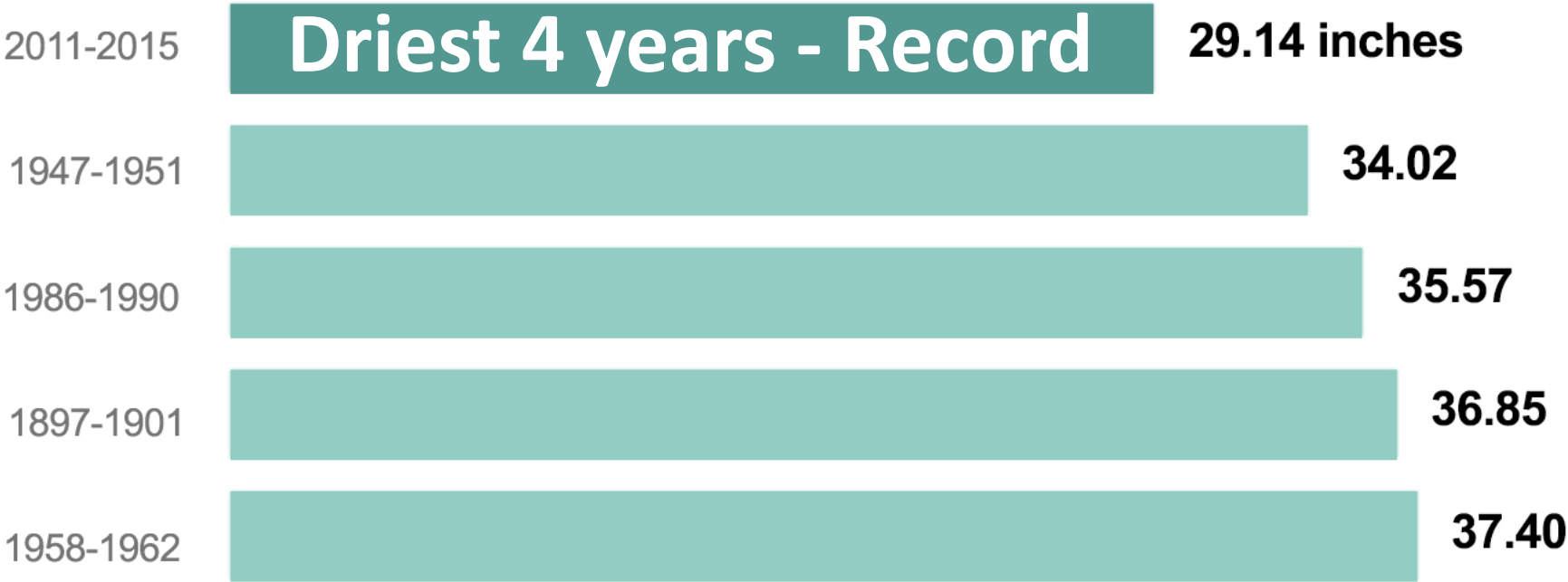
The background is a dark, swirling, abstract painting with a central figure. The colors are primarily dark blues, blacks, and browns, with some lighter, swirling patterns. A central figure is visible, appearing to be a person's face or head, rendered in a dark, almost black color. The overall mood is mysterious and somewhat unsettling.

*Here Comes  
XXL El Niño!*

**YIKES!**

# Los Angeles' four-year rainfall total hits bottom

2011-2015 marked the driest four consecutive rainy seasons on record in downtown L.A.



Source: National Weather Service

@latimesgraphics

# Los Angeles' four-year rainfall total hits bottom

2011-2015 marked the driest four consecutive years in the history of L.A.

2011-2015

1947-1951

1986-1990

1897-1901

1958-1962

inches

10.02

5.57

6.85

7.40

**IN L.A. & CA,  
THIS PUNISHING  
DROUGHT BEGAN  
15 YEARS AGO!**

Source: National

@latimesgraphics

# THE GREAT WET HOPE



*El Niño*





**THE GREAT WET HOPE**



**ARE WE READY  
FOR EL NIÑO?**

*El Niño*





**Pitiful humans!  
There is no  
escape!**

©1996  
DUGINSKI

@cartoonKahuna





**NOT TRUE!  
GET PREPARED!**

WELCOME  
TO  
CALIFORNIA

mans!  
o

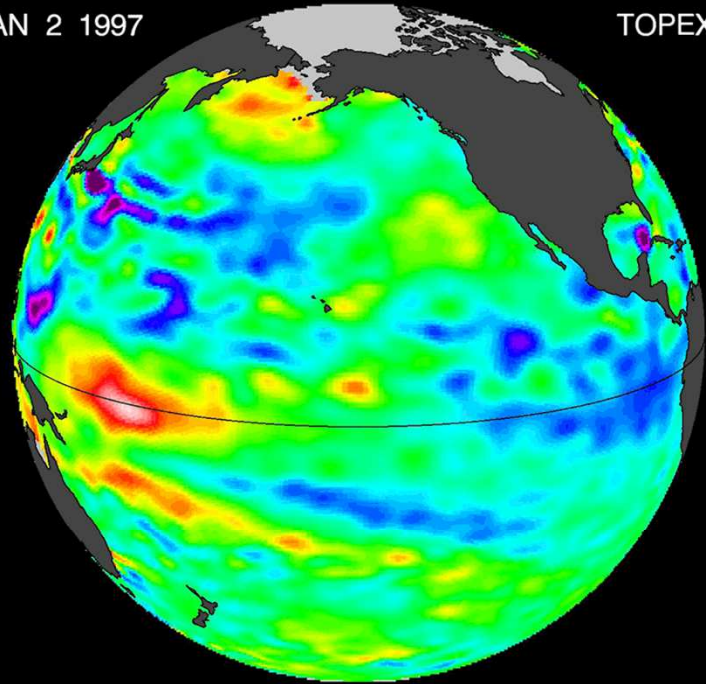
©1987  
DUBINSKI

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# El Niño 1997

JAN 2 1997

TOPEX/POS

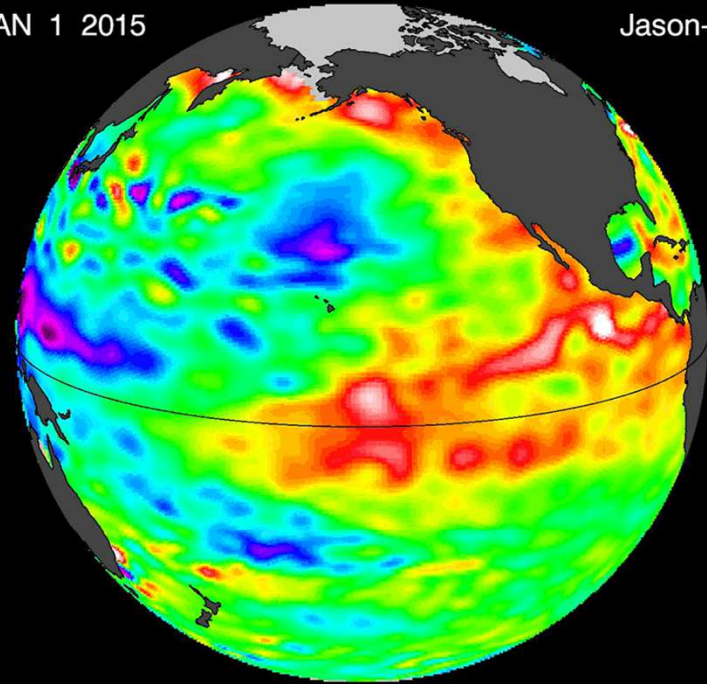


**TOPEX/Poseidon 1997**

# El Niño 2015

JAN 1 2015

Jason-2



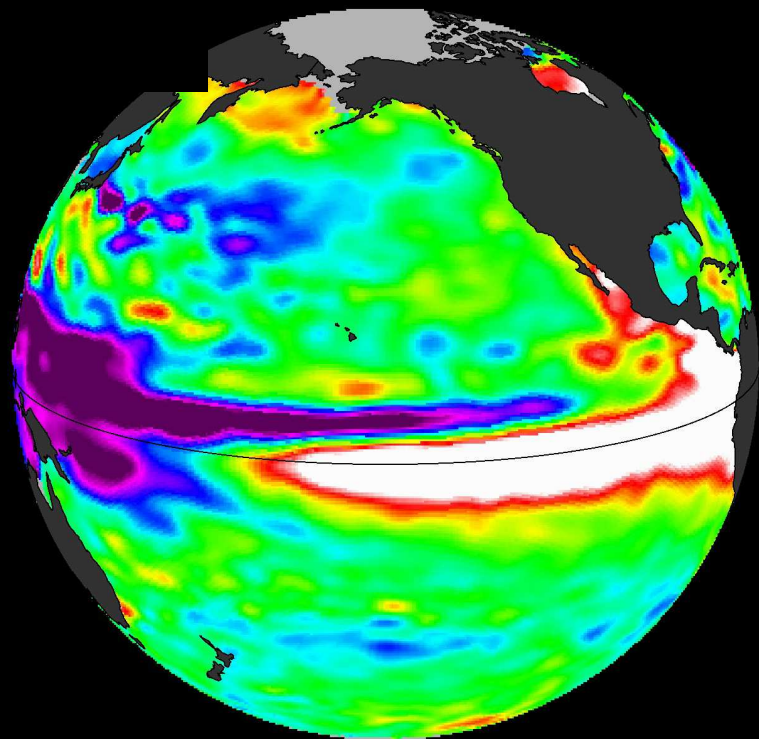
**Jason-2 2015**



El Niño 2015-2016

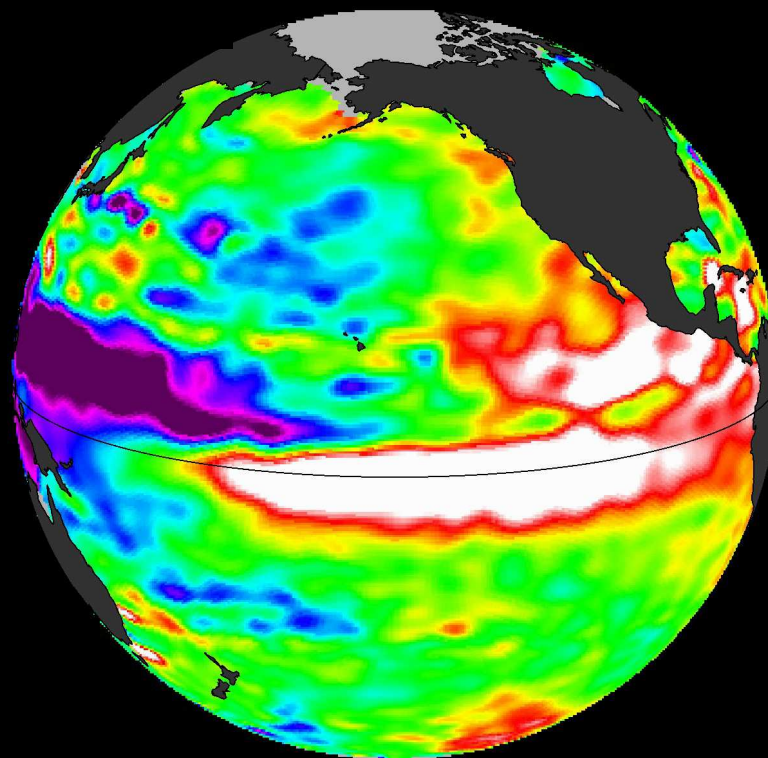
Check it out online:

[sealevel.jpl.nasa.gov](http://sealevel.jpl.nasa.gov)



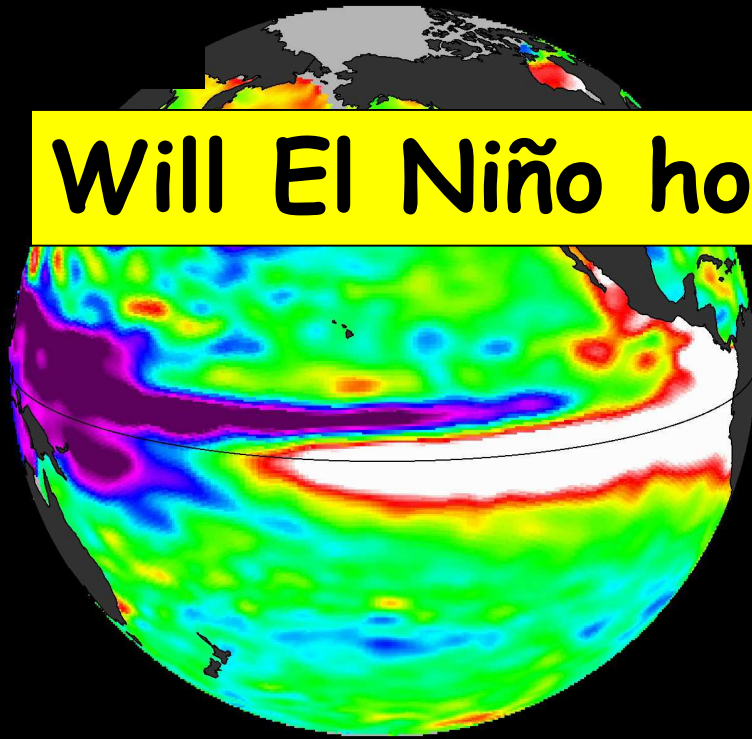
Oct 23, 1997

Oct 22, 2015



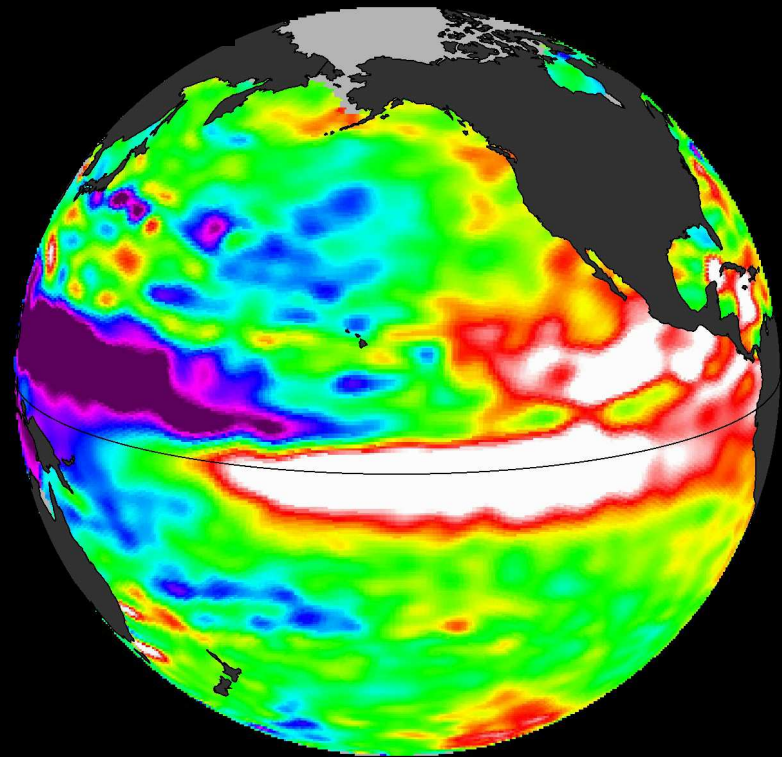


# Will El Niño hose us this winter?

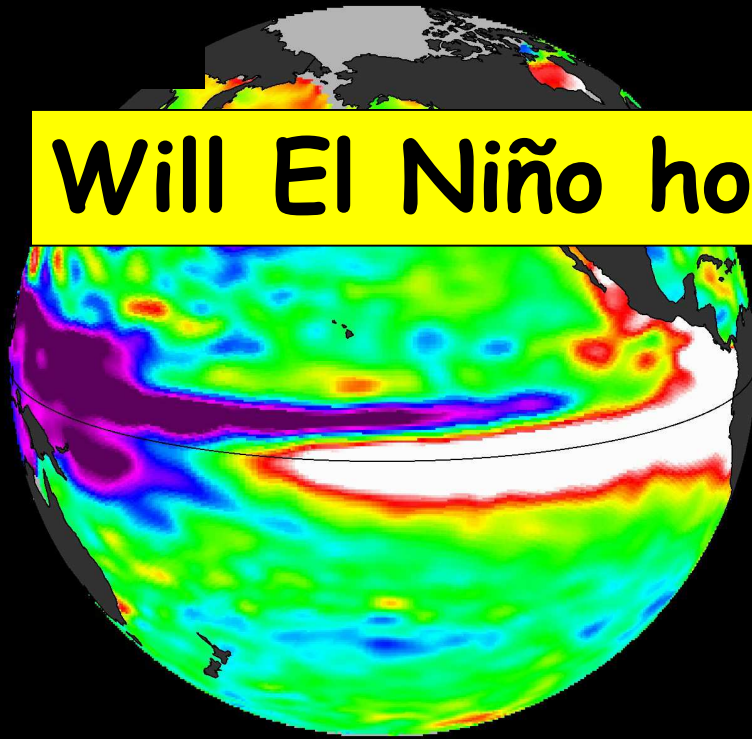


Oct 23, 1997

Oct 22, 2015

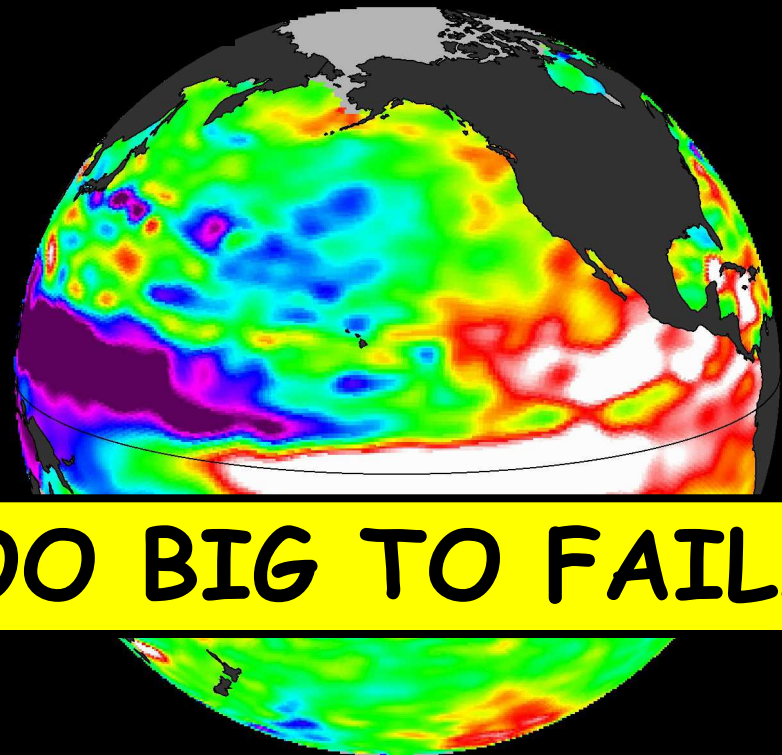


**Will El Niño hose us this winter?**



Oct 23, 1997

Oct 22, 2015



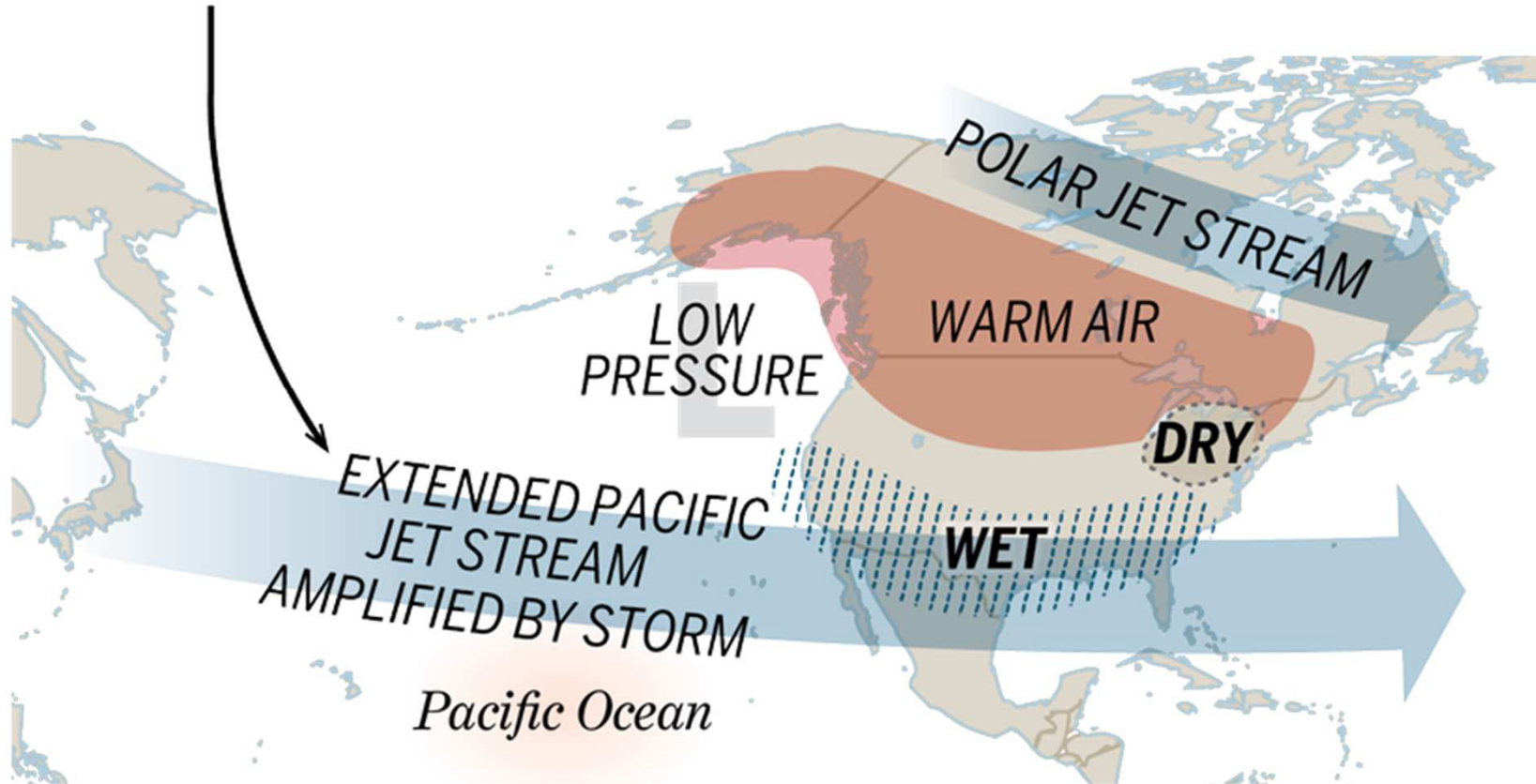
**ABSOLUTELY, "TOO BIG TO FAIL!"**



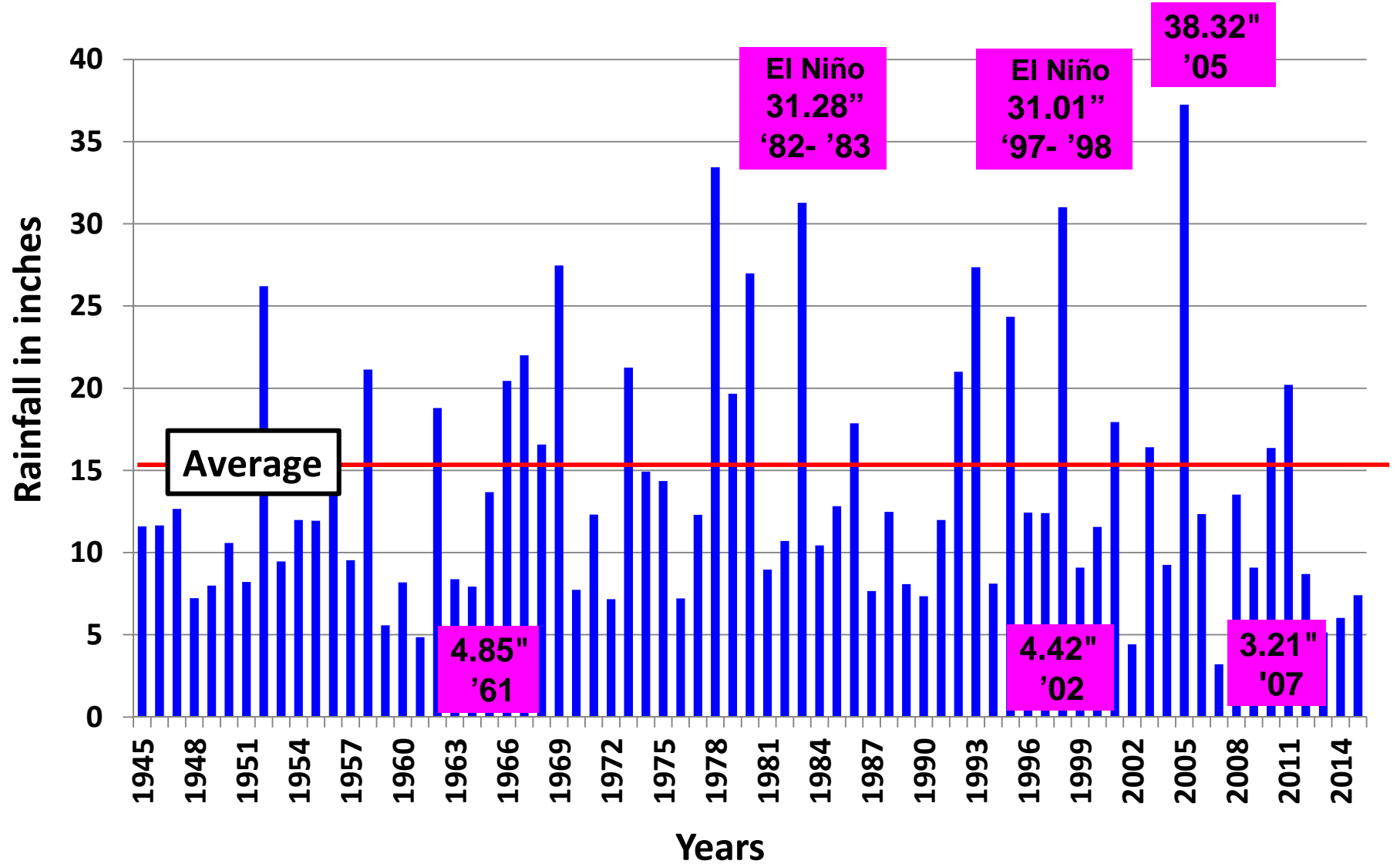
# El Niño impact

During an El Niño year, the jet stream, which ushers storms across North America, intensifies and moves farther south than usual.

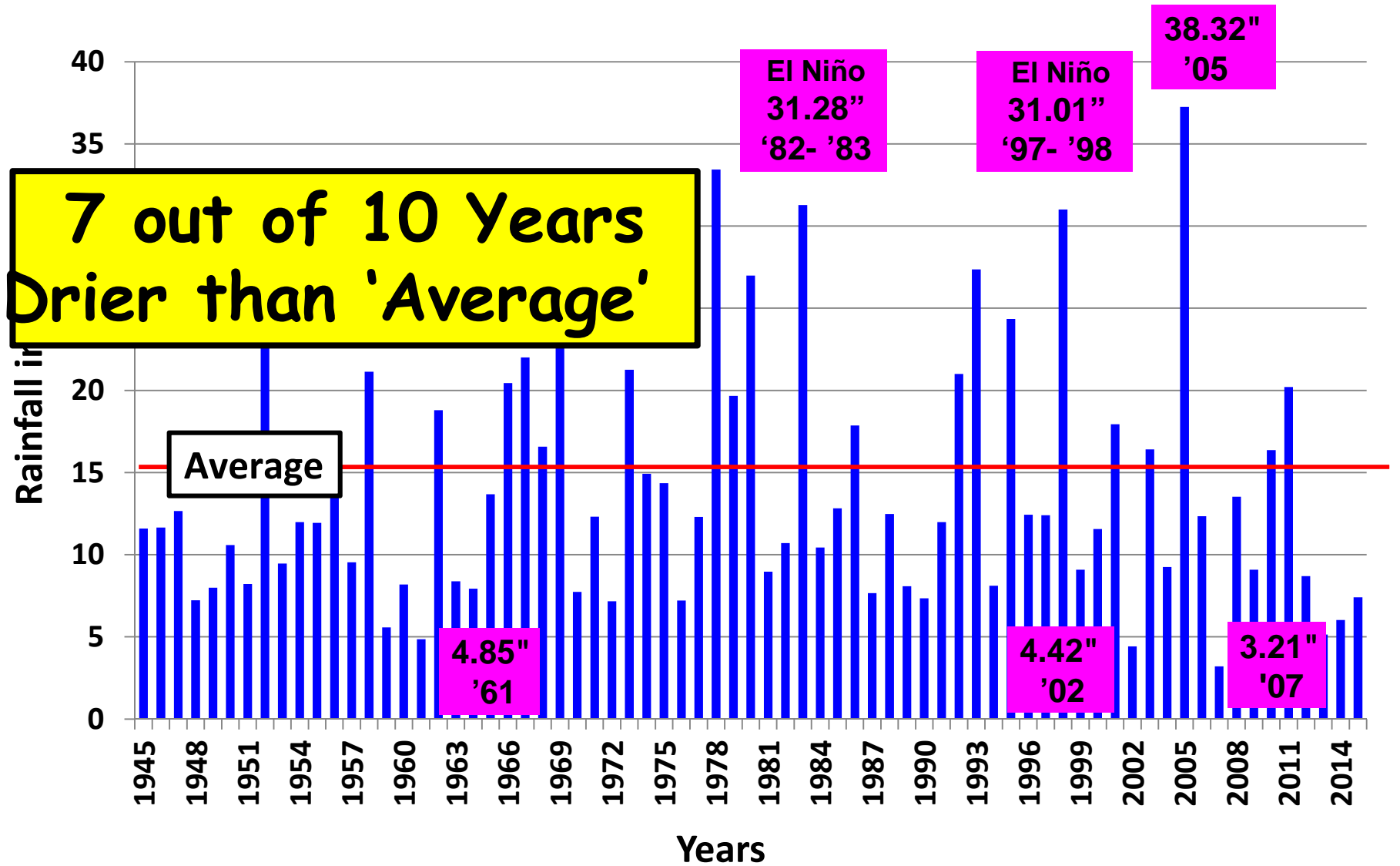
The result can be abnormally wet winters in California and dry and warmer-than-usual winters in the Pacific Northwest.



# Downtown Los Angeles Rainfall 1945 – 2015

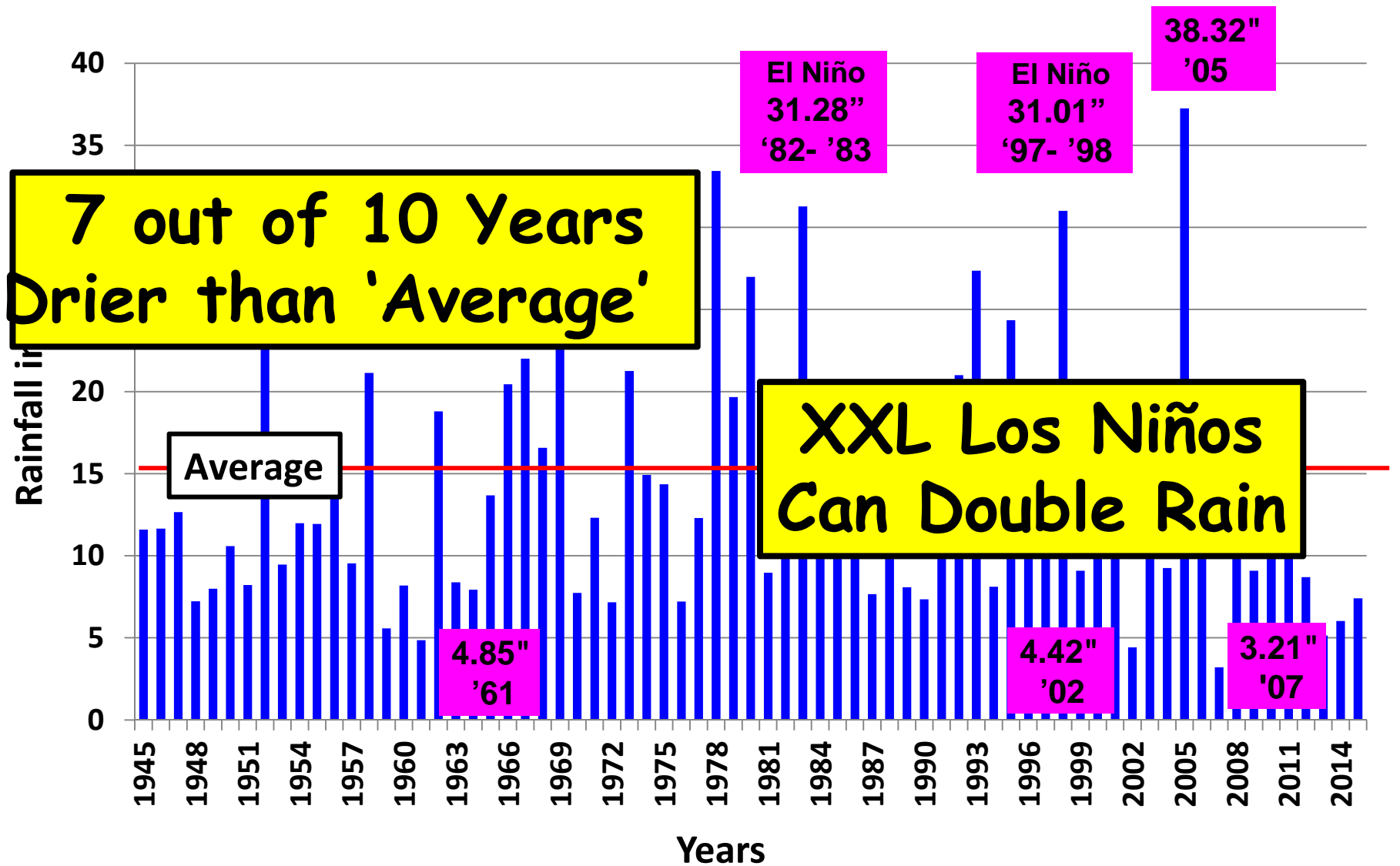


# Downtown Los Angeles Rainfall 1945 – 2015



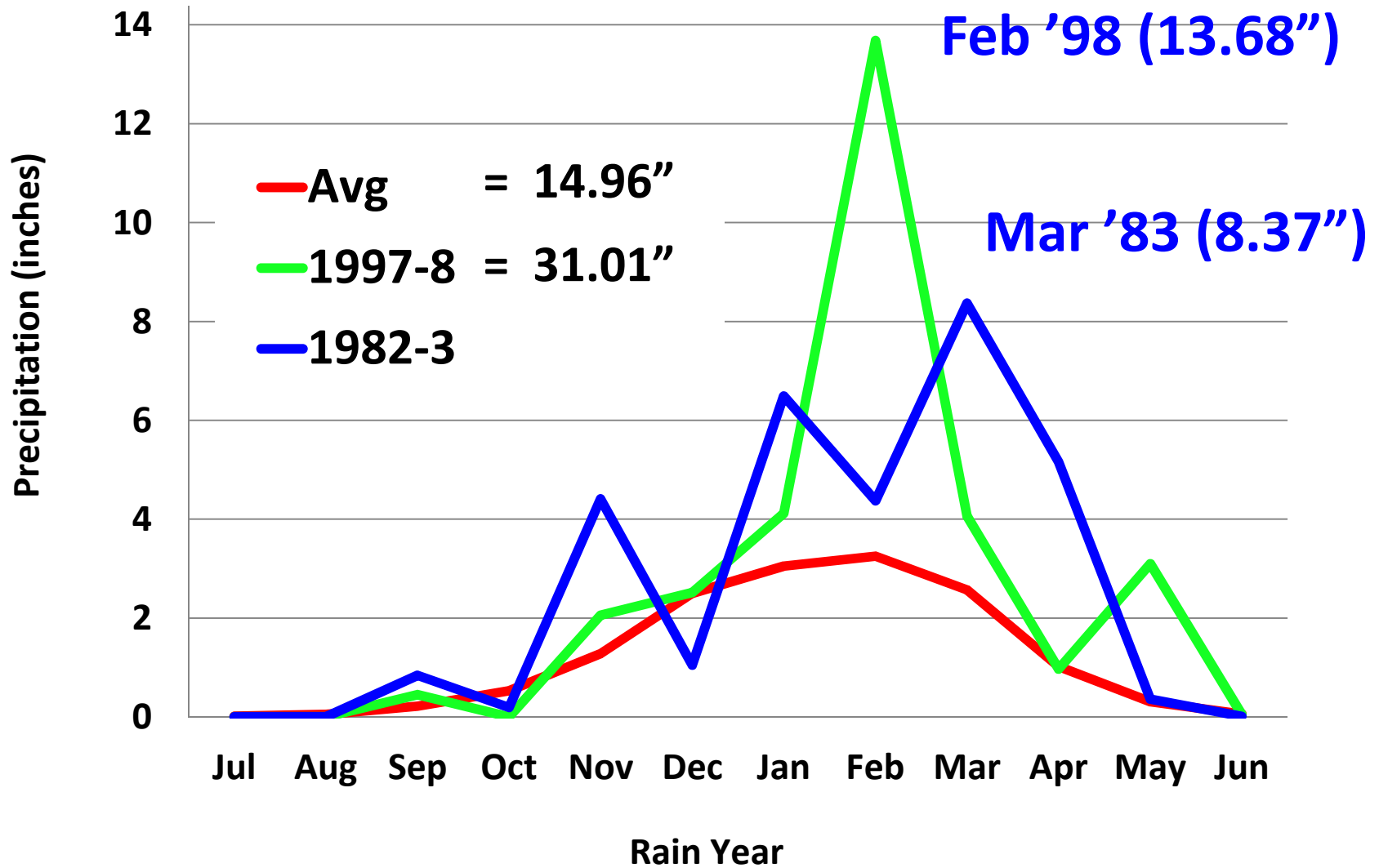


# Downtown Los Angeles Rainfall 1945 – 2015



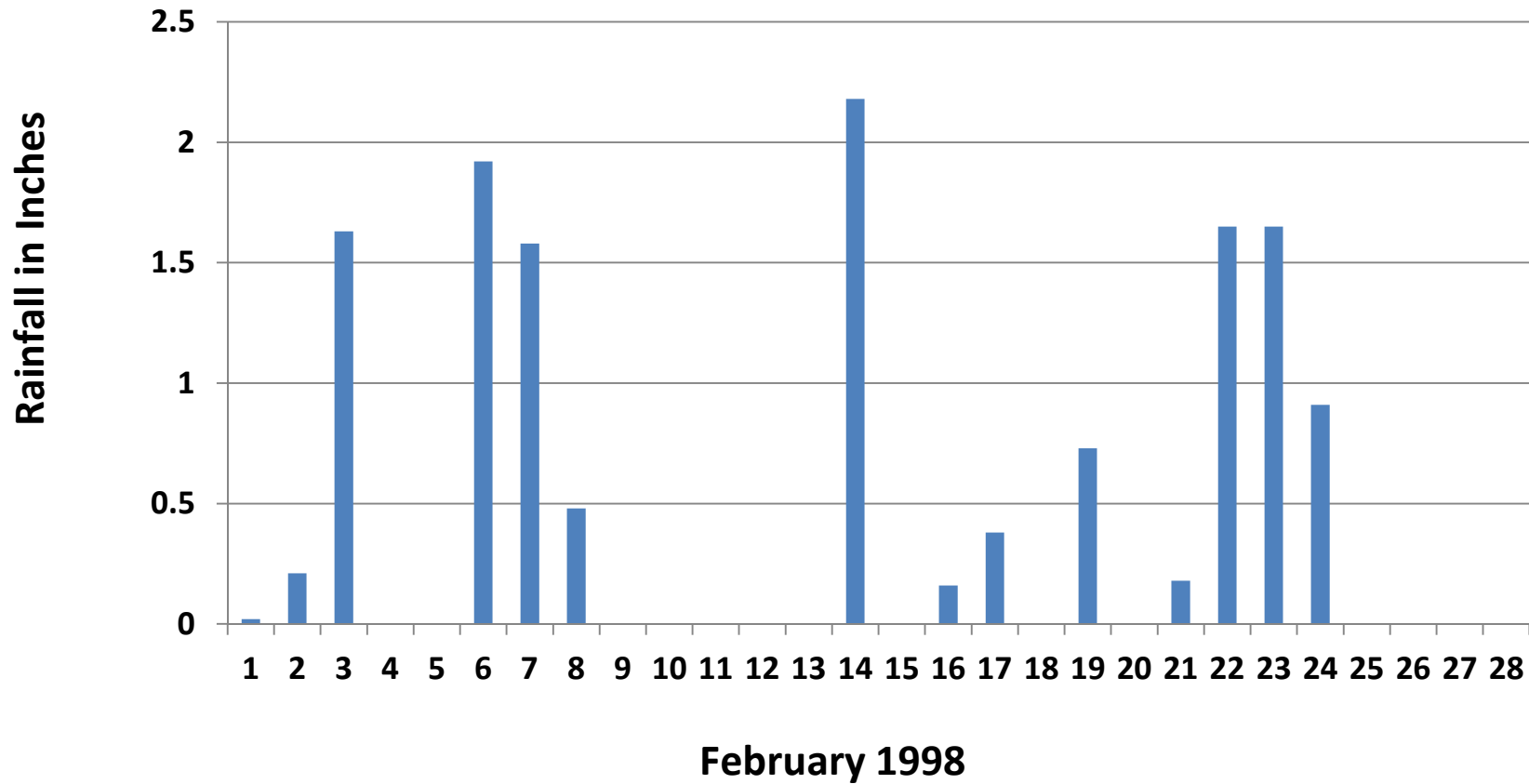
# L.A. Rain Past XXL Los Niños

## Downtown L.A. Monthly Rainfall



# Downtown LA – Daily Rainfall

## Feb 1998 (4 big storms, 2 small storms)

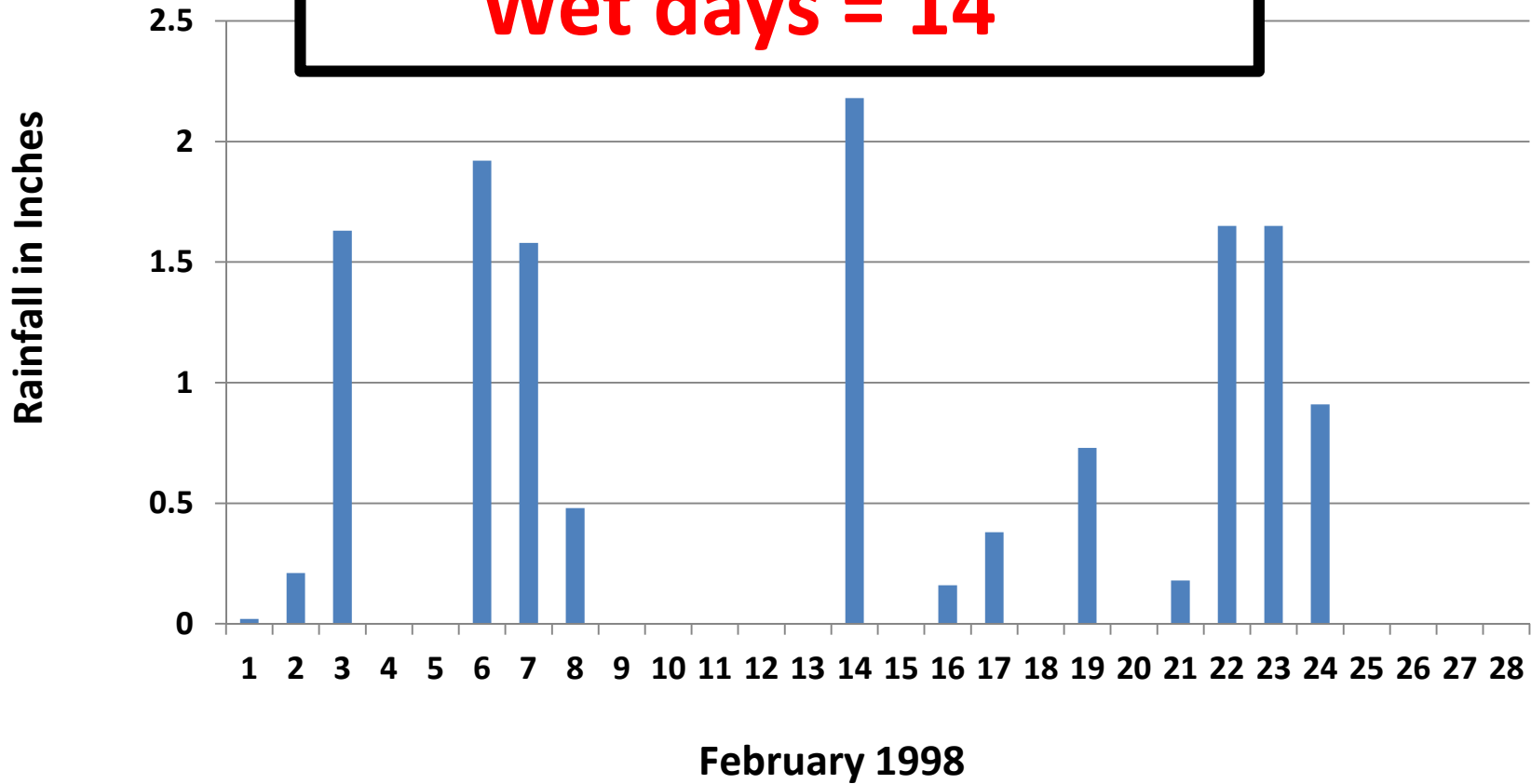




Do  
Feb

**Monthly Total = 13.68"**  
**(Wettest Feb since 1878)**  
**Dry days = 14**  
**Wet days = 14**

fall  
orms)



Do  
Feb

Monthly Total = 13.68"  
(Wettest Feb since 1878)

Dry days = 14

Wet days = 14

fall  
orms)

2.5

LOS NIÑOS RAINS  
TEND TO BE  
STEADY, NOT  
SPECTACULAR!



***Los Angeles River - flood of March 2<sup>nd</sup>, 1938,  
10" in one day, aerial view above Victory Blvd.***

F38 6323-7 APR 3/31/38



**S. CALIFORNIA'S  
LARGEST FLOODS  
NOT LOS NINOS!**

*Los Angeles River - flood of March 2<sup>nd</sup>, 1938,  
10" in one day, aerial view above Victory Blvd.*

F38 6323-7 APR 3/31/58



An aerial photograph showing a wide, flooded river channel. The water is dark and turbulent. The surrounding area is a mix of urban and undeveloped land. Overlaid on the image are three text boxes: a large yellow one at the top, a light green one below it, and a smaller yellow one at the bottom. The text is in a bold, hand-drawn style.

**SOCAL HAS MUCHO  
INFRASTRUCTURE TO  
PREVENT REGIONAL  
FLOOD DAMAGE!**

**NOT LOS NINOS!**

*Los Angeles River - flood of March 2<sup>nd</sup>, 1938,  
10" in one day, aerial view above Victory Blvd.*

F38 6323-7 APR 3/31/58

An aerial photograph of a flooded Los Angeles River, showing a wide expanse of water and surrounding urban areas. The image is overlaid with several comic-style text boxes. The largest box is yellow with black text. A smaller yellow box is below it with red text. A light green box is partially visible behind the yellow boxes. At the bottom, a black box contains white text. In the bottom left corner, there is a small white text box with black text.

**SOCAL HAS MUCHO  
INFRASTRUCTURE TO  
PREVENT REGIONAL  
FLOOD DAMAGE!**

**THE PROBLEMS  
ARE LOCAL!**

*Los Angeles River - flood of March 2<sup>nd</sup>, 1938,  
10" in one day, aerial view above Victory Blvd.*

F38 6323-7 APR 3/31/58



THAT'LL MEAN  
MONSTER  
POLLUTED  
URBAN RUNOFF...



© 9/15  
DUGINSKI

A Godzilla El Niño will be a sweet,  
huge down-payment on drought relief.

*If we survive the floods,  
mud slides & havoc!*

**But REAL DROUGHT BUSTERS are:**

- 1) A decade or more of above normal rainfall & snowpack,
- 2) Plus, learning to adapt to a warmer & drier California!



A Godzilla El Niño will be a sweet, huge down-payment on drought relief.

*If we* **YIKES!** *floods,*  
*me* *voc!*

**But REAL DROUGHT BUSTERS are:**

- 1) A decade or more of above normal rainfall & snowpack,
- 2) Plus, learning to adapt to a warmer & drier California!

**The National Weather Service's Climate Prediction Center is warning that this year's El Niño could be as costly and devastating as the one that drenched California in 1997-98.**

**Back then, devastating storms killed 17 people and caused \$550 million dollars in damages.**

The National

**NOT IF WE ARE  
PREPARED & USE  
COMMON SENSE!**

tion

be as

ed

pe and

for dollars in damages.



Since 1890, it has rained 10 times - 1895, 1899, 1906, 1910, 1916, 1922, 1934, 1937, 1955 and 2006.





El Niño  
Never Rained  
On Our Parade!