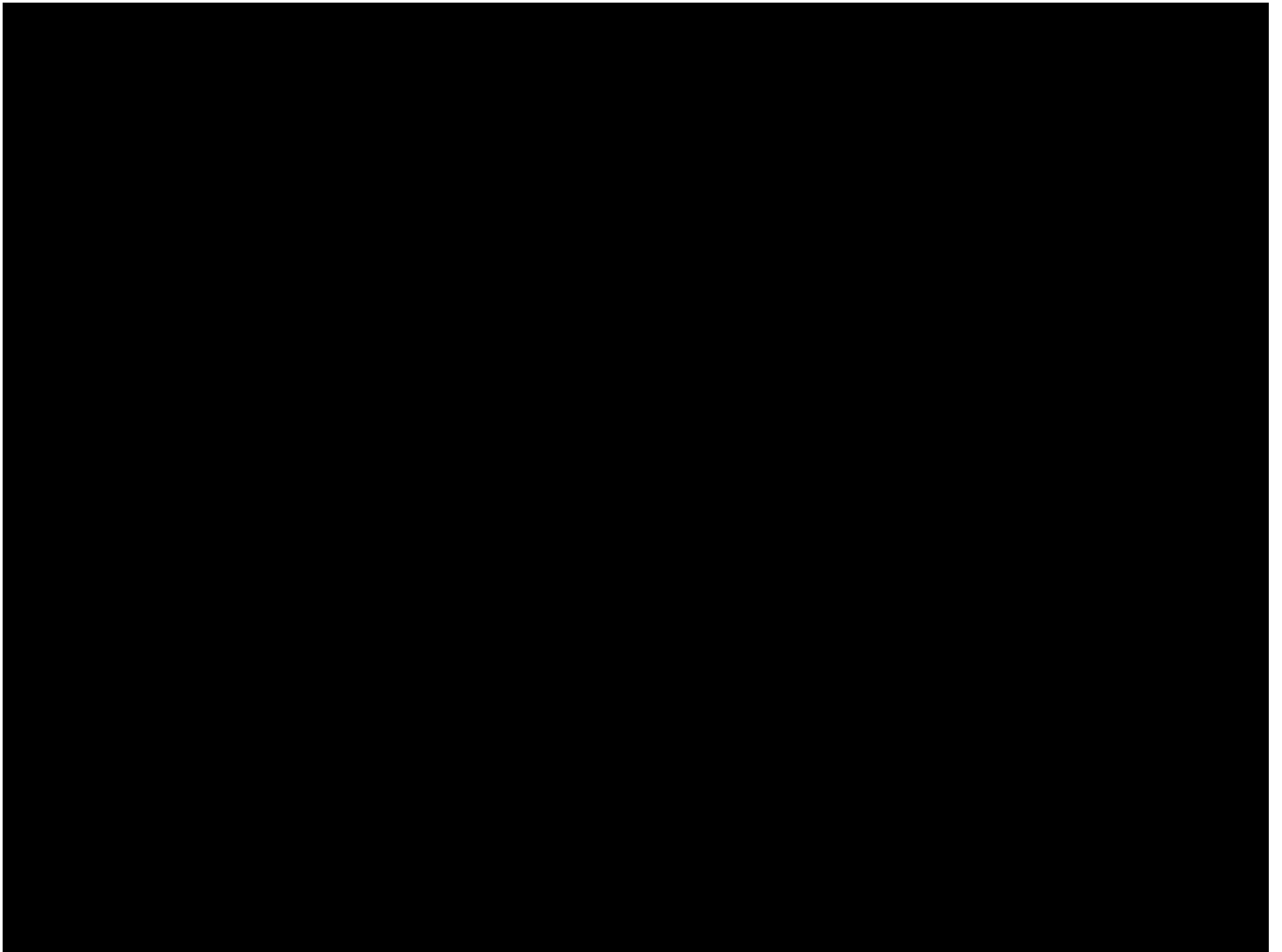


# **Climate Variability**

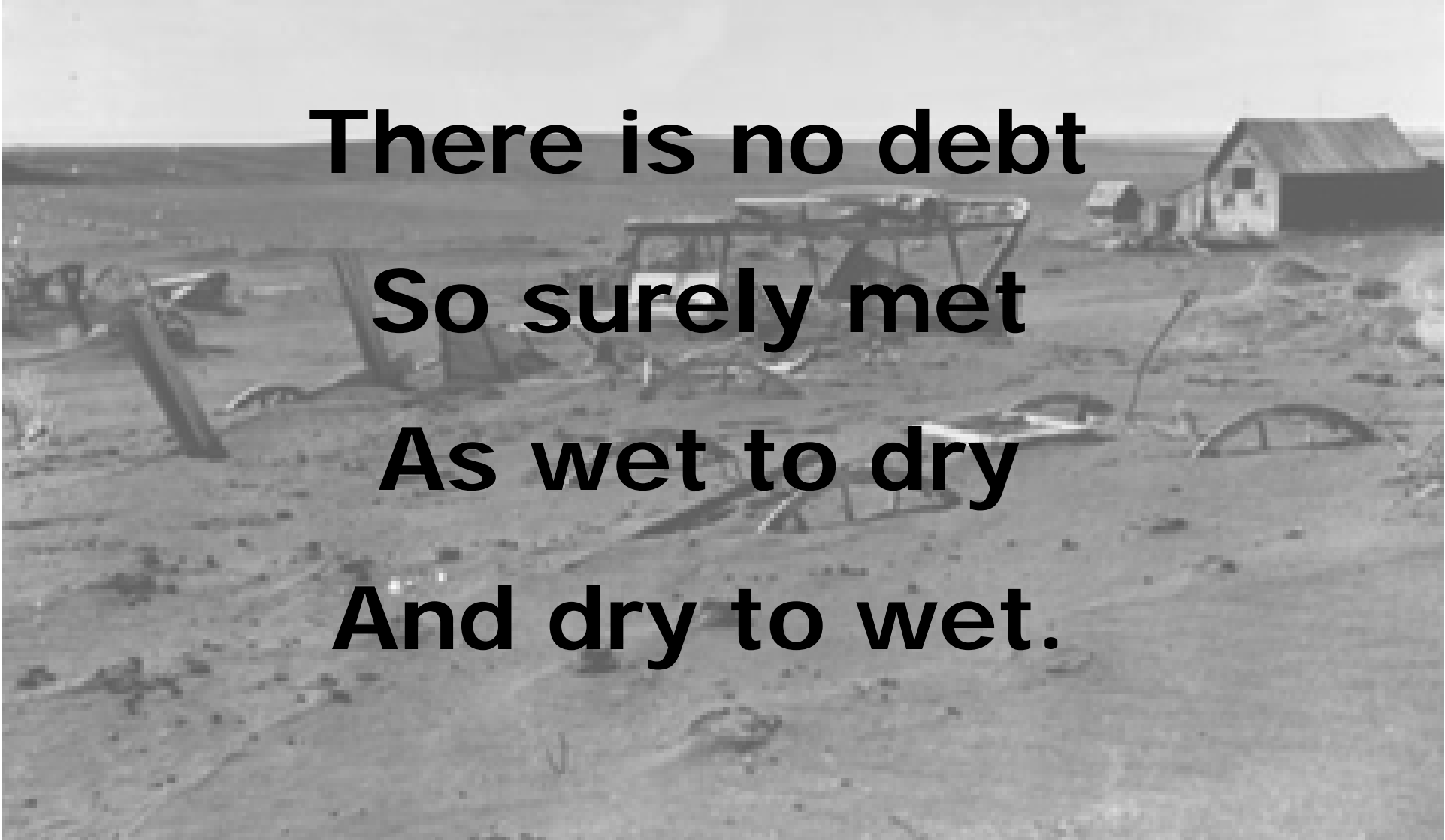
**John Wheeler**

**WDAY-TV**

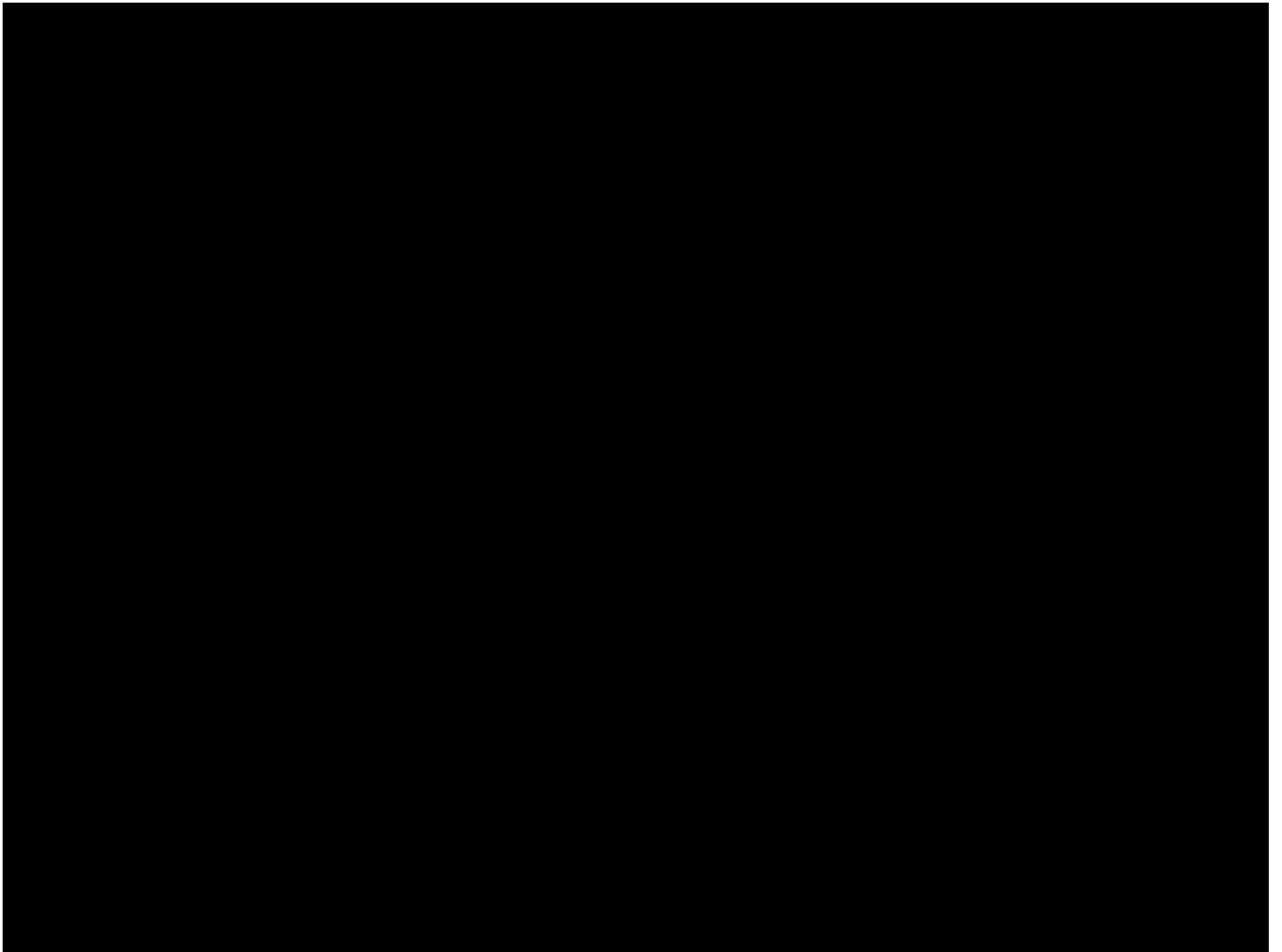
**[jwheeler@wday.com](mailto:jwheeler@wday.com)**



# Variable Weather

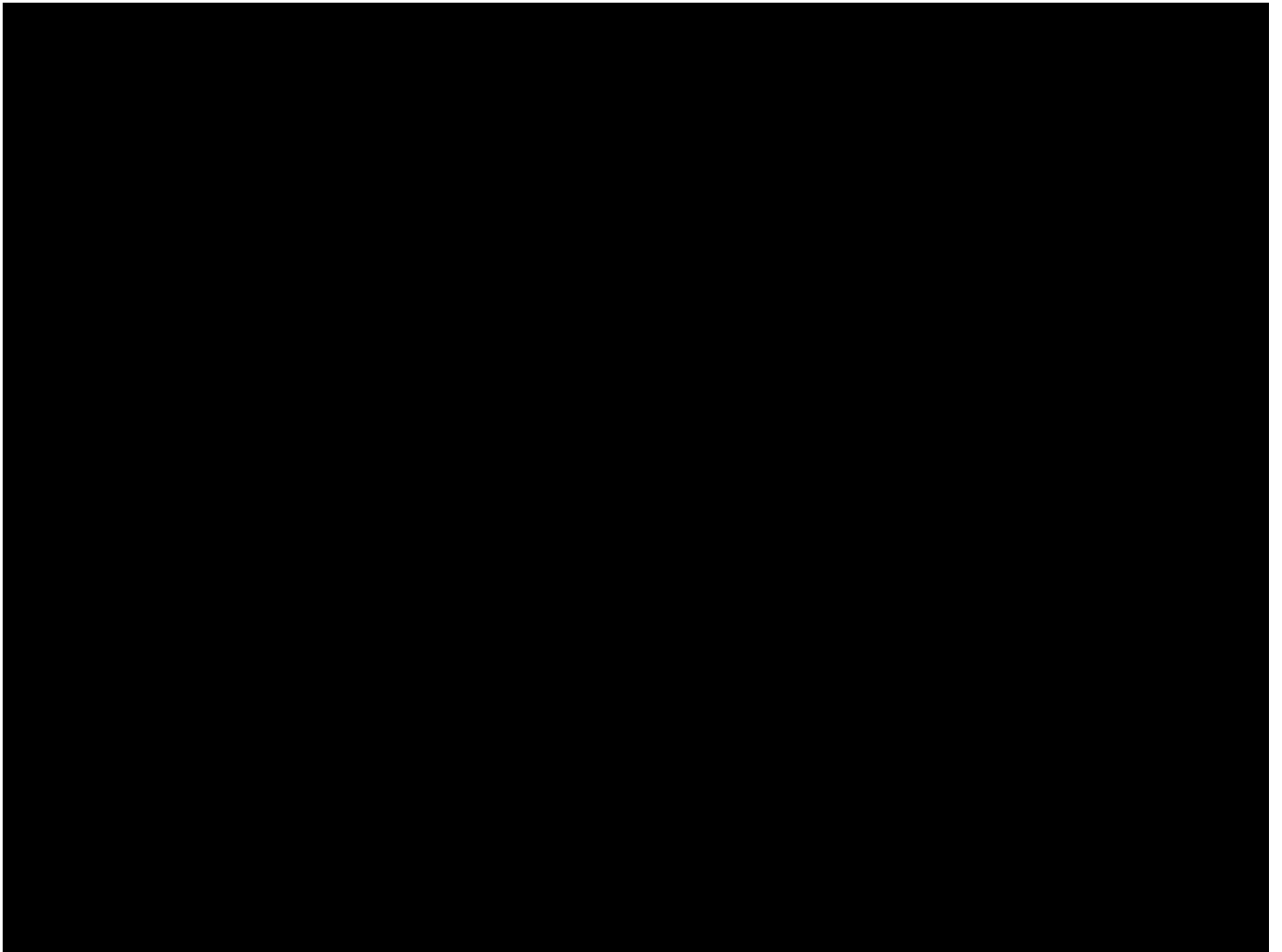


**There is no debt  
So surely met  
As wet to dry  
And dry to wet.**



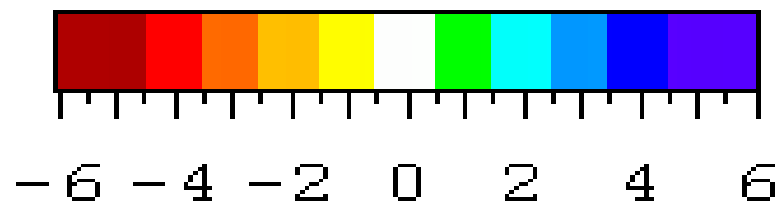
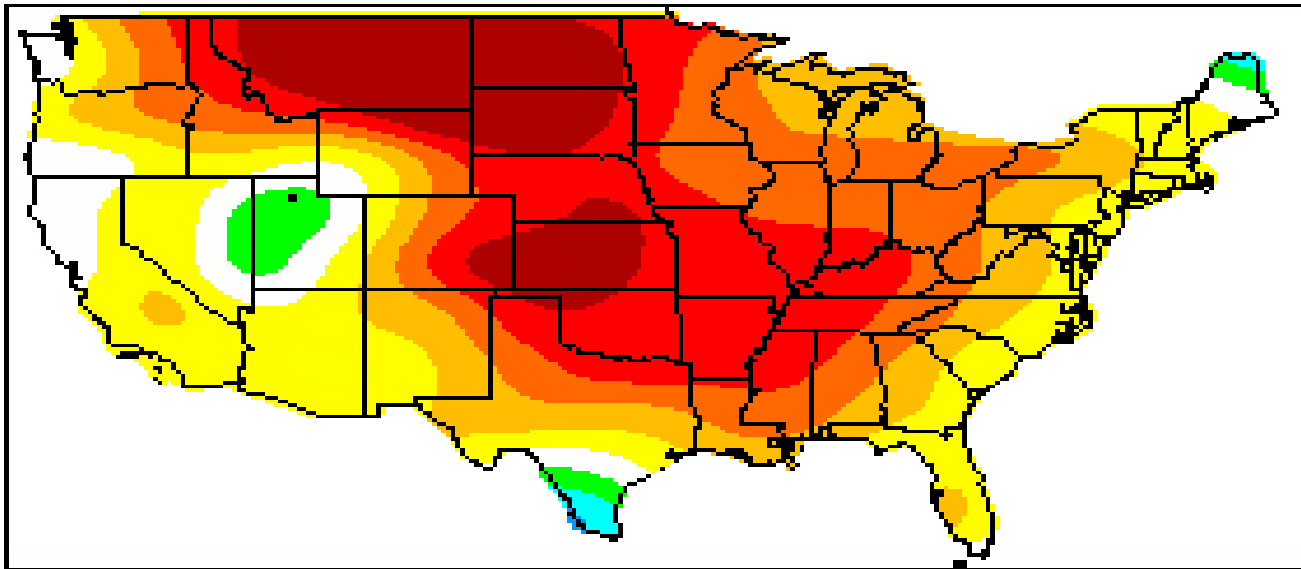
**1988-1989 Drought**

**\$40 Billion**



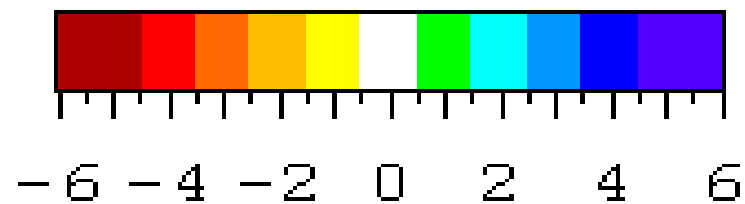
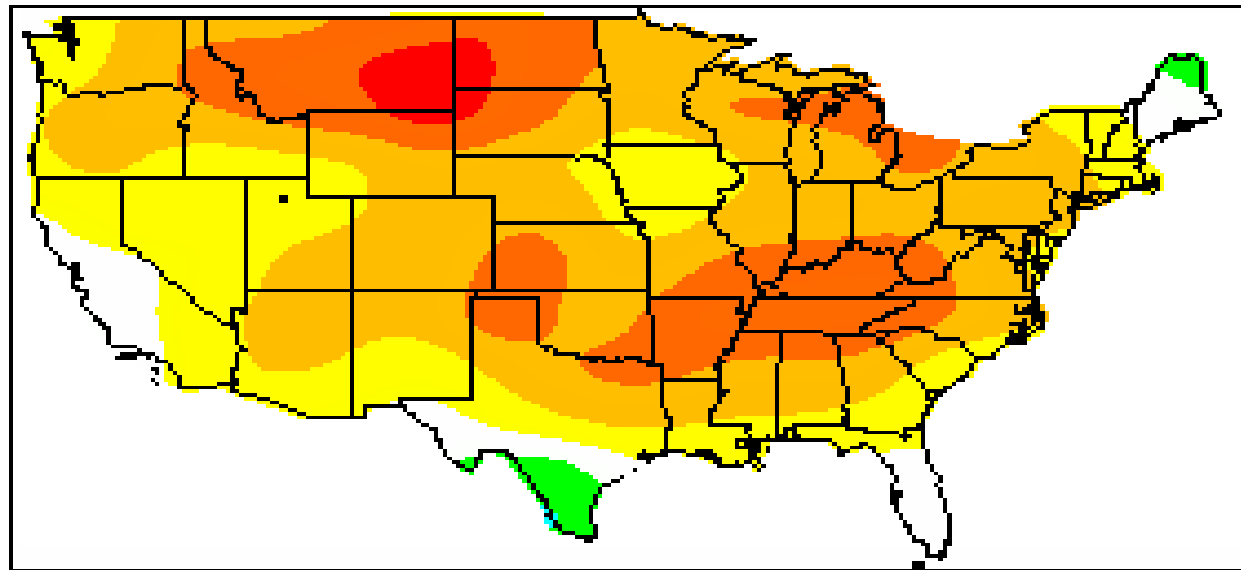
# Palmer Index

1936



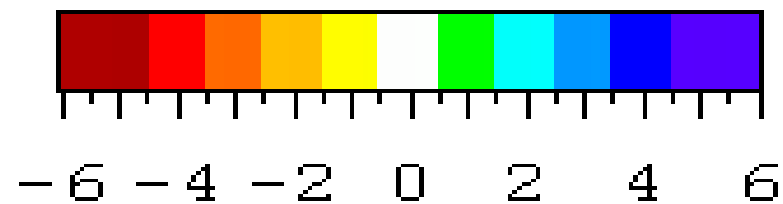
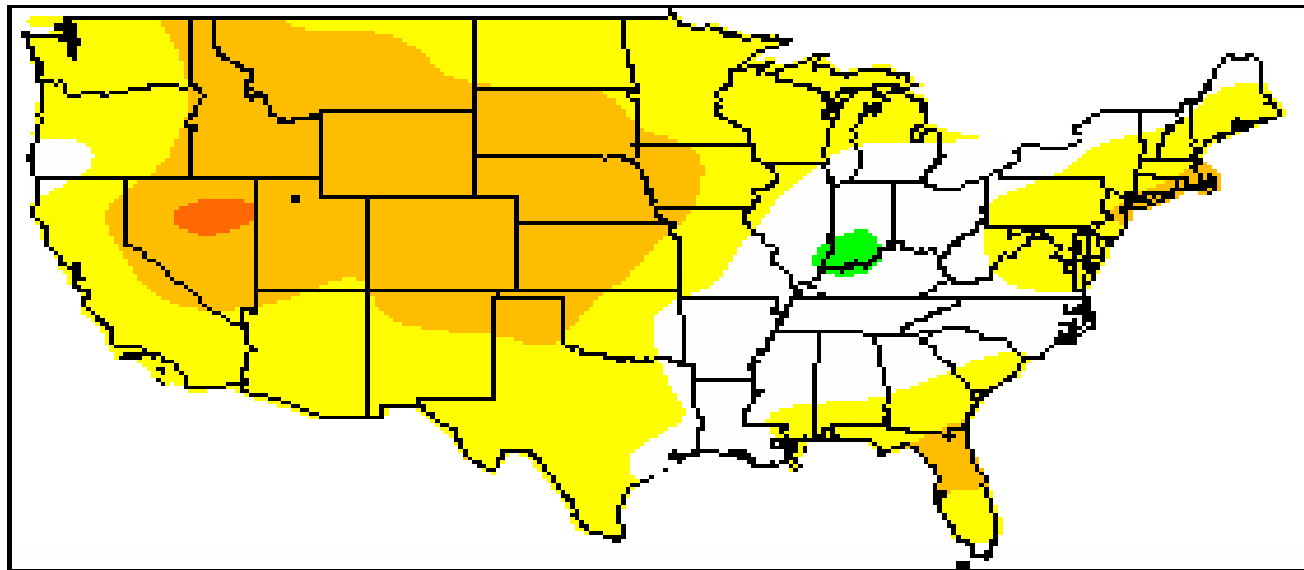
# Palmer Index, Tree Ring

1936



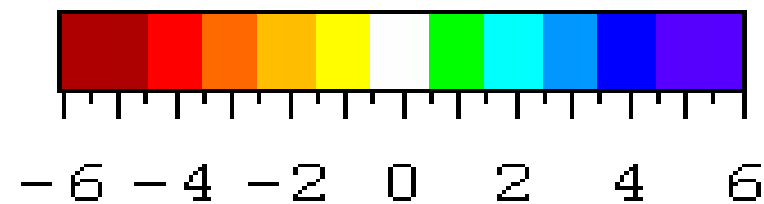
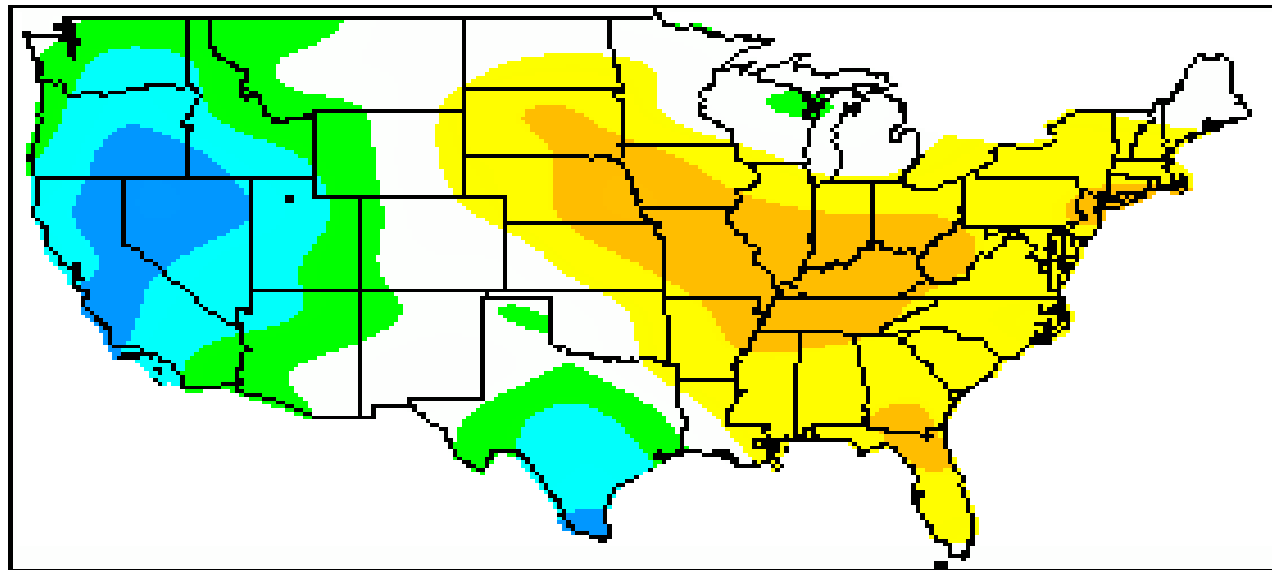
# Palmer Index, Tree Rings

1798



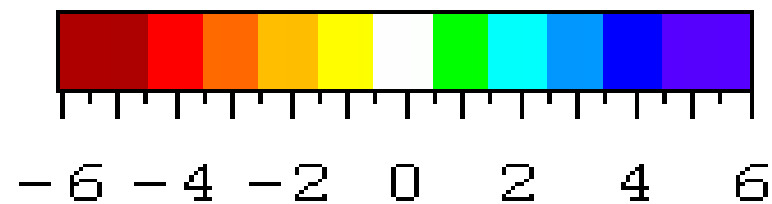
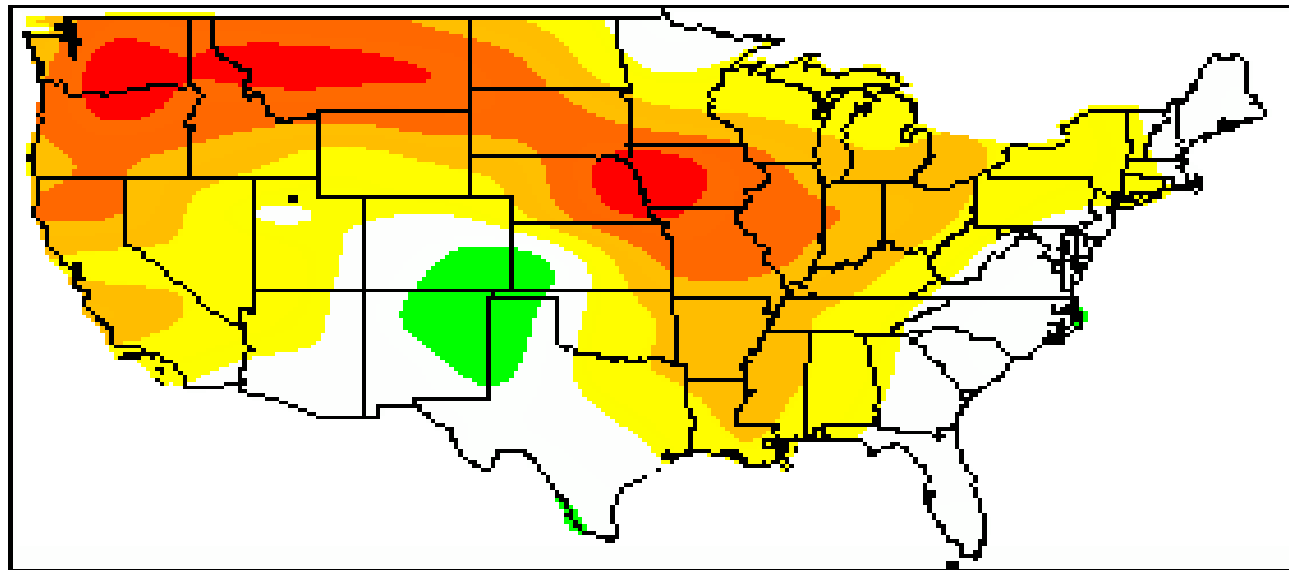
# Palmer Index, Tree Rings

1799



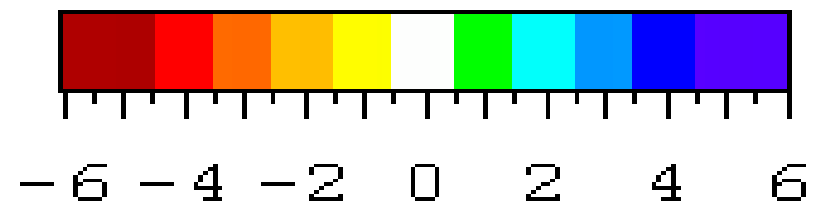
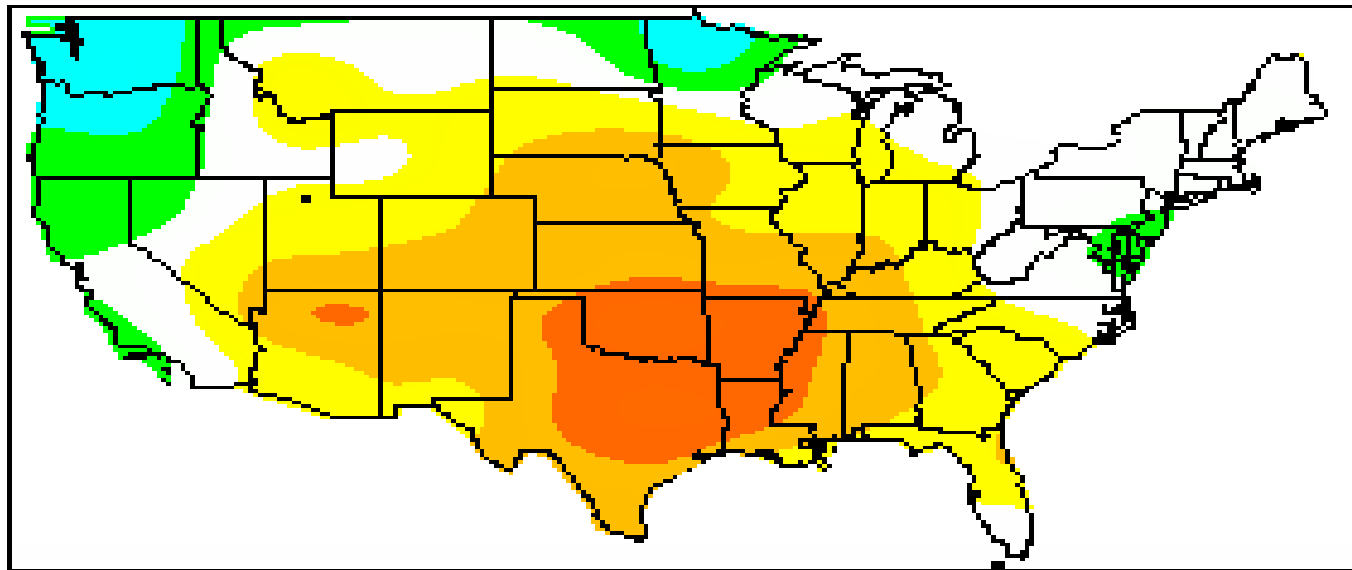
# Palmer Index, Tree Rings

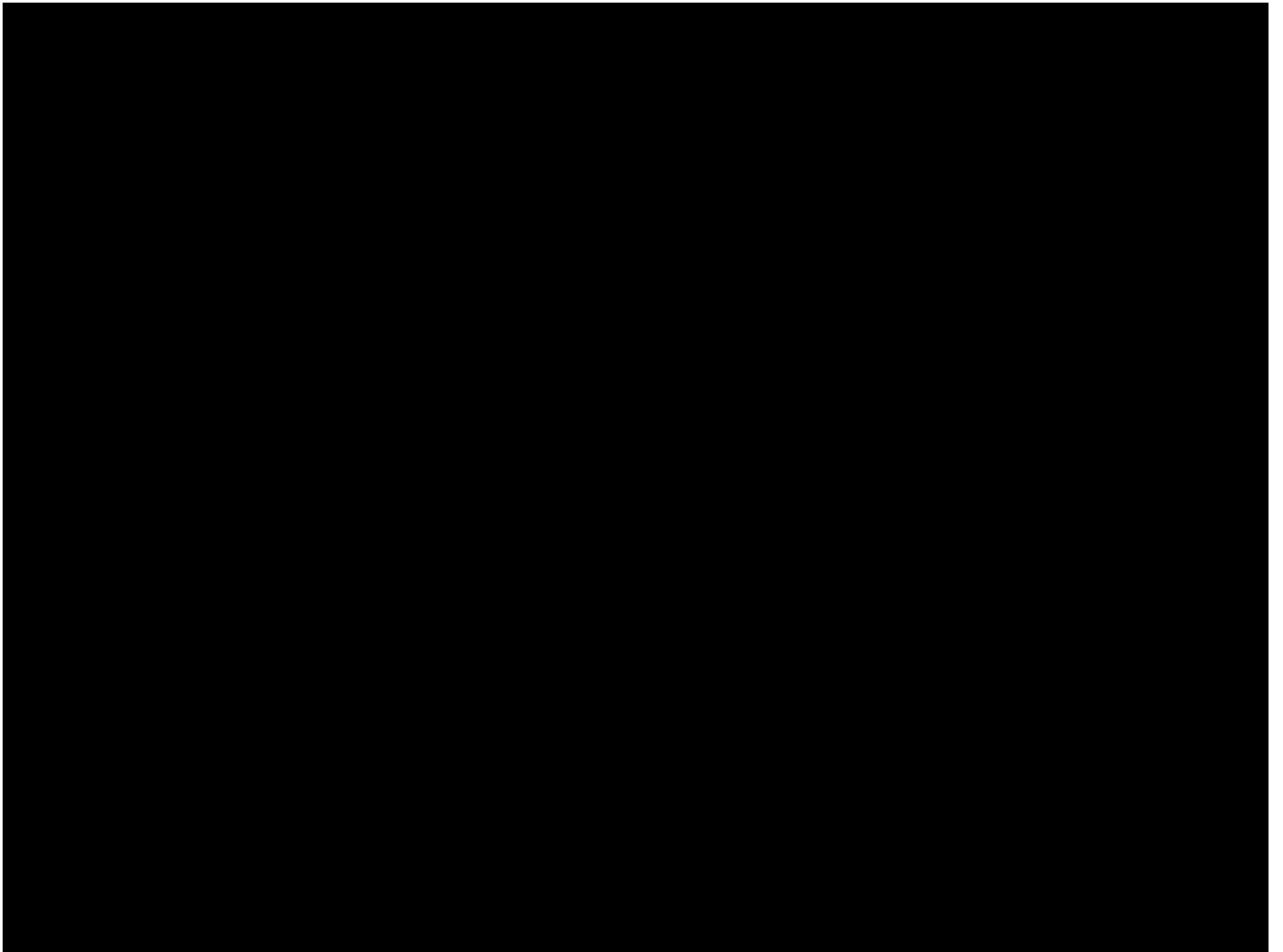
1800



# Palmer Index, Tree Rings

1801





# January Record Lows

<b>Jan. 1</b>	<b>-35`</b>	<b>1885</b>	<b>Jan. 9</b>	<b>-38`</b>	<b>1887</b>
<b>Jan. 2</b>	<b>-32`</b>	<b>1885</b>	<b>Jan. 10</b>	<b>-34`</b>	<b>1886</b>
<b>Jan. 3</b>	<b>-35`</b>	<b>1919</b>	<b>Jan. 11</b>	<b>-44`</b>	<b>1888</b>
<b>Jan. 4</b>	<b>-41`</b>	<b>1884</b>	<b>Jan. 12</b>	<b>-38`</b>	<b>1912</b>
<b>Jan. 5</b>	<b>-37`</b>	<b>1883</b>	<b>Jan. 13</b>	<b>-37`</b>	<b>1916</b>
<b>Jan. 6</b>	<b>-43`</b>	<b>1887</b>	<b>Jan. 14</b>	<b>-32`</b>	<b>1888</b>
<b>Jan. 7</b>	<b>-39`</b>	<b>1887</b>	<b>Jan. 15</b>	<b>-36`</b>	<b>1888</b>
<b>Jan. 8</b>	<b>-48`</b>	<b>1887</b>			

# January Record Lows

**Jan. 16 -35` 1977**  
**Jan. 17 -32` 1977**  
**Jan. 18 -42` 1887**  
**Jan. 19 -37` 1892**  
**Jan. 20 -42` 1883**  
**Jan. 21 -41` 1888**  
**Jan. 22 -37` 1936**  
**Jan. 23 -36` 1883**

**Jan. 24 -36` 1904**  
**Jan. 25 -34` 1883**  
**Jan. 26 -32` 1950**  
**Jan. 27 -31` 1915**  
**Jan. 28 -33` 1966**  
**Jan. 29 -36` 1951**  
**Jan. 30 -34` 1916**  
**Jan. 31 -34` 1888**

# January Record Highs

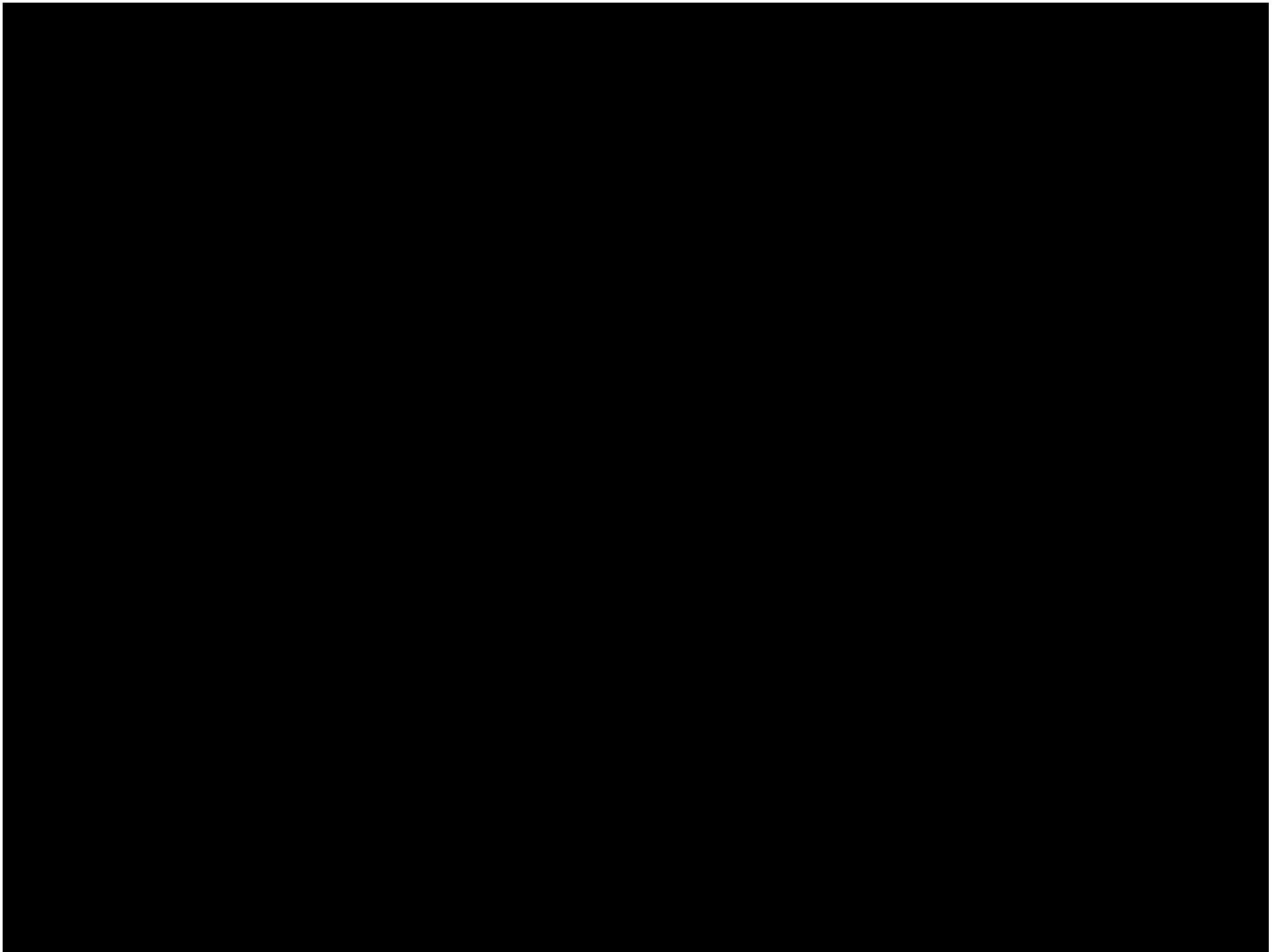
**Jan. 1** 43` 1964  
**Jan. 2** 46` 1964  
**Jan. 3** 40` 1927  
**Jan. 4** 41` 2001  
**Jan. 5** 40` 1984  
**Jan. 6** 42` 1928  
**Jan. 7** 44` 1963  
**Jan. 8** 50` 1900

**Jan. 9** 49` 1958  
**Jan. 10** 47` 1990  
**Jan. 11** 46` 1987  
**Jan. 12** 49` 1987  
**Jan. 13** 48` 1987  
**Jan. 14** 42` 1914  
**Jan. 15** 40` 1942

# January Record Highs

Jan. 16 47` 1942  
Jan. 17 43` 1926  
Jan. 18 48` 1908  
Jan. 19 52` 1900  
Jan. 20 54` 1908  
Jan. 21 52` 1900  
Jan. 22 51` 1942  
Jan. 23 52` 1942

Jan. 24 52` 1981  
Jan. 25 51` 2002  
Jan. 26 46` 1947  
Jan. 27 41` 1892  
Jan. 28 41` 1927  
Jan. 29 52` 1931  
Jan. 30 45` 1931  
Jan. 31 41` 1993



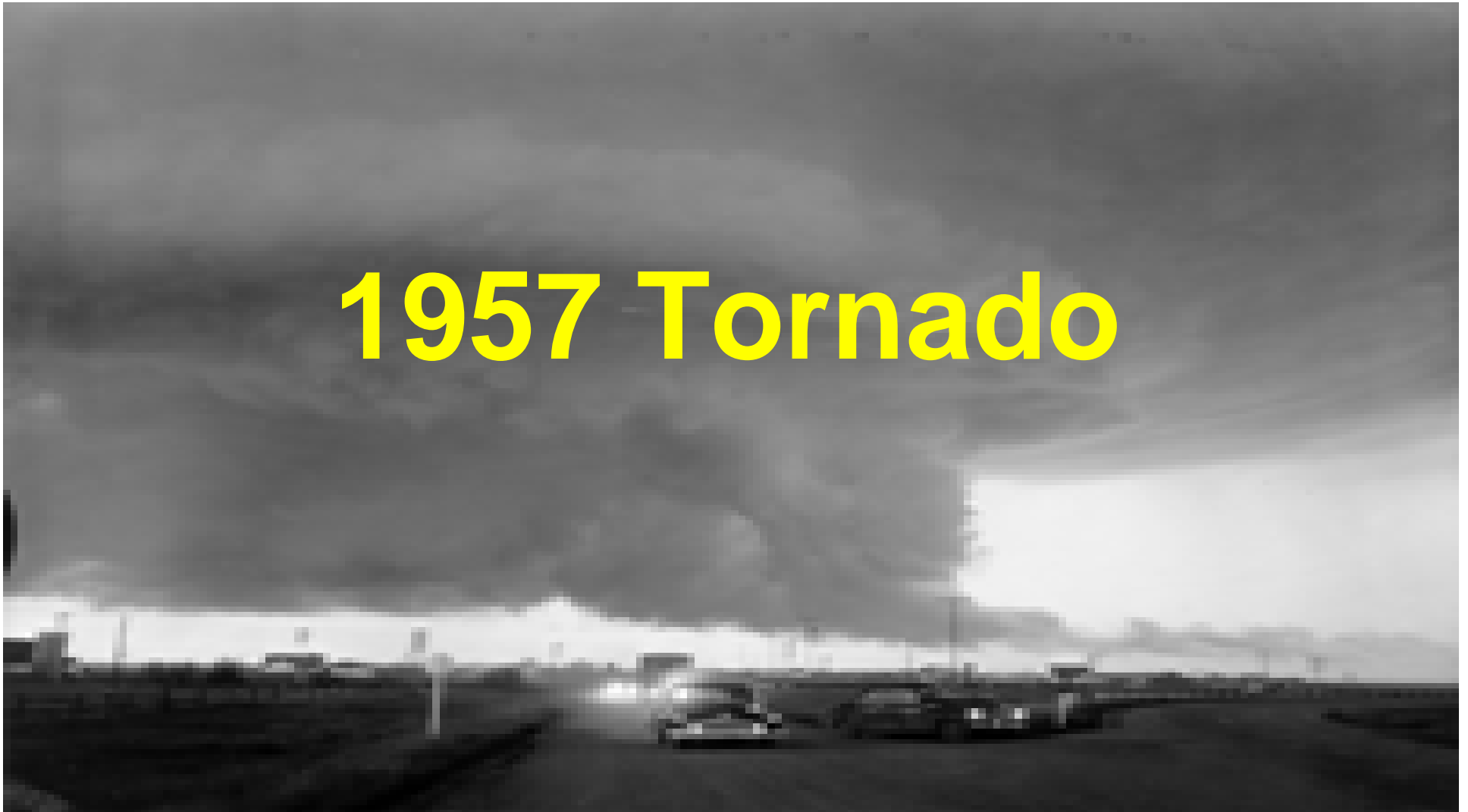
# Bismarck Pulitzer



1937 Dust Bowl

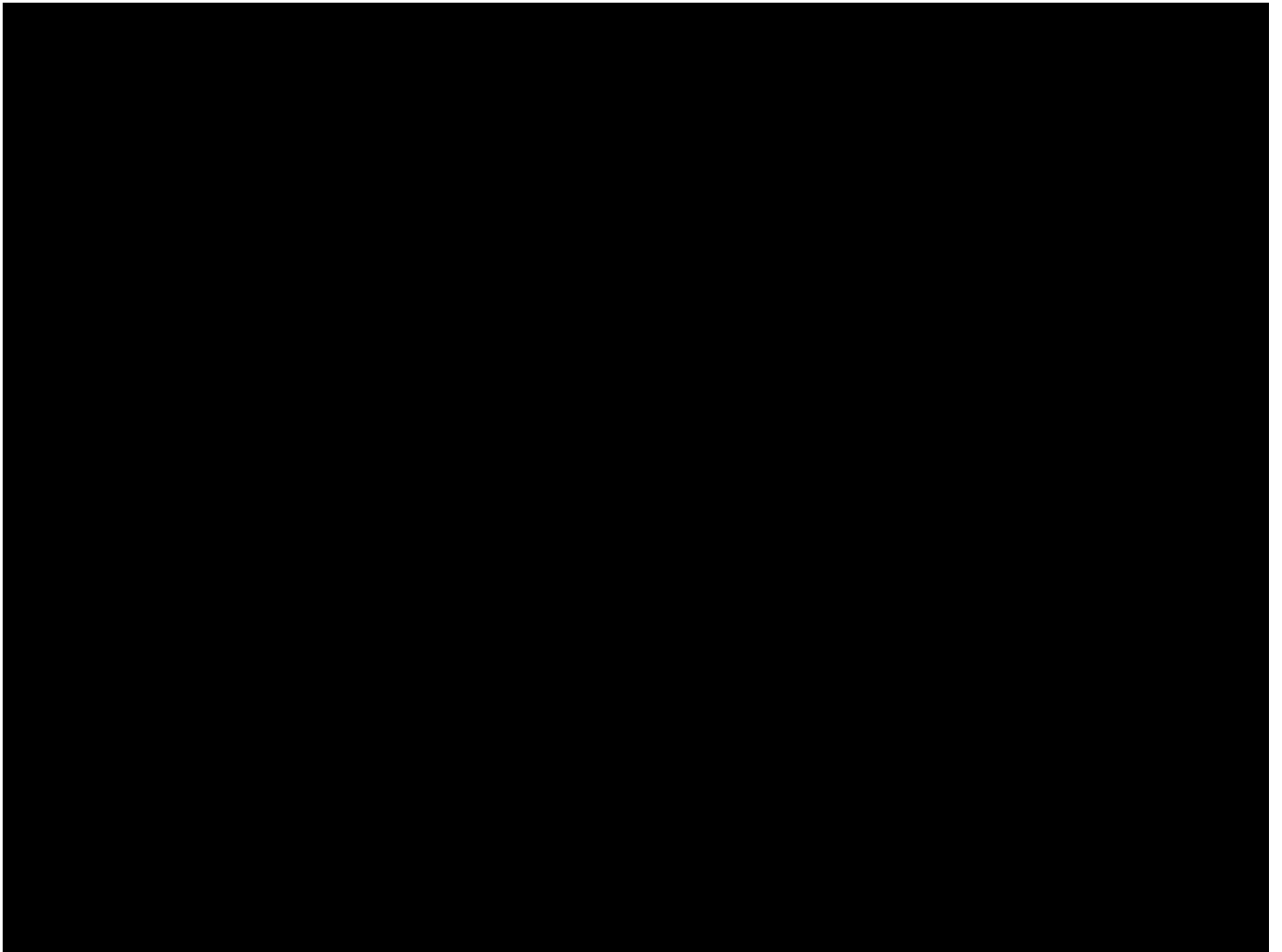
# Fargo Pulitzer

## 1957 Tornado



# Grand Forks Pulitzer





# **Climate Variability**

**John Wheeler**

**WDAY-TV**

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