



Climate Atlas of the United States



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NOAA / NESDIS / National Climatic Data Center



AMS 82nd Annual Meeting

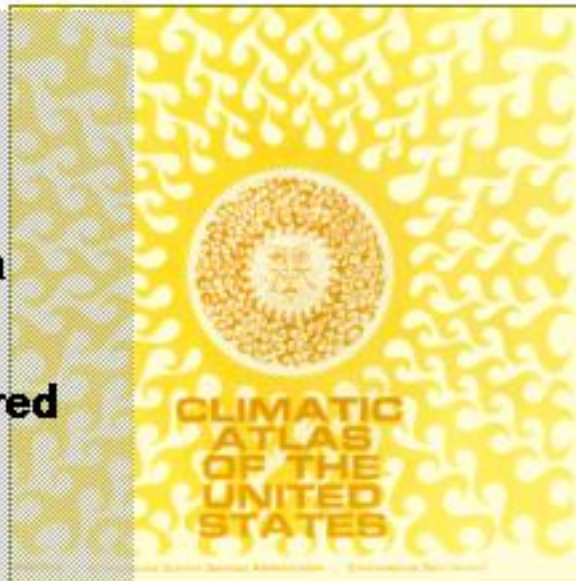
National Climatic Data Center



A Climate Atlas for the Digital Age

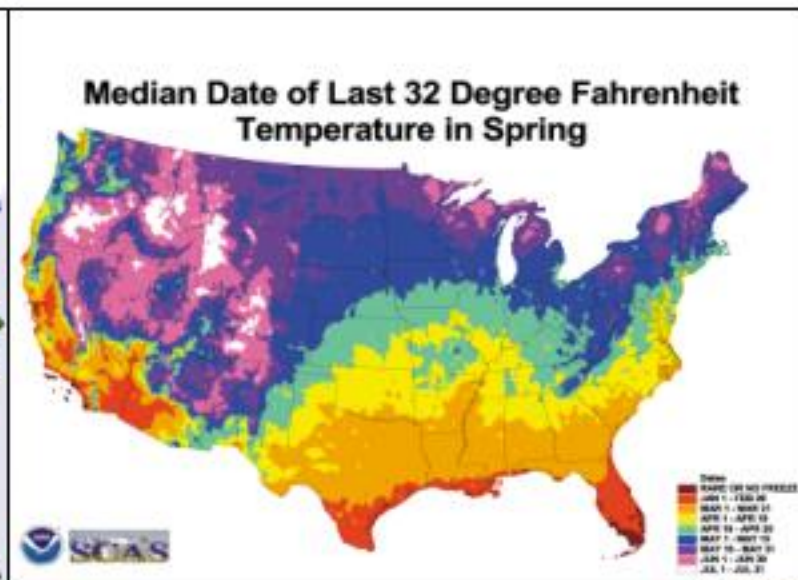
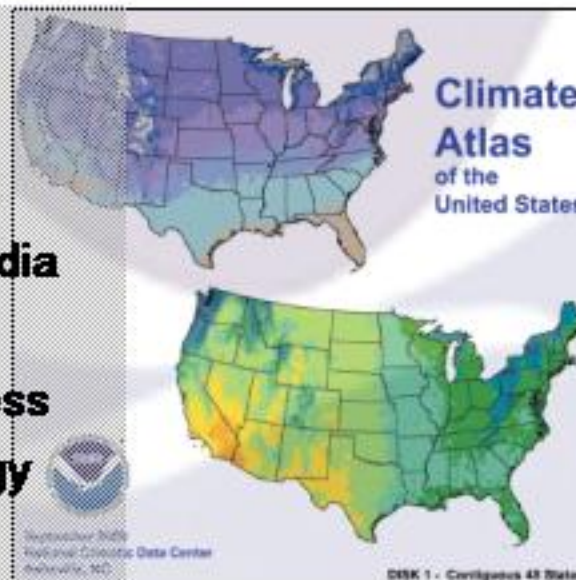
1968

- 1931-60 Data
- Paper Atlas
- Hand-contoured



Today

- 1961-90 Data
- Electronic media
 - CD-ROM
 - Web access
- GIS technology



September 2008
National Climatic Data Center
Chapel Hill, NC

DISK 1 - Continental US States



SCAS

Climate Atlas Development Partners

- NOAA's National Climatic Data Center
- OSU's Oregon Climate Service
- Spatial Climate Analysis Service
- USDA's Natural Resources Conservation Service





GIS by ESRI



JAVA



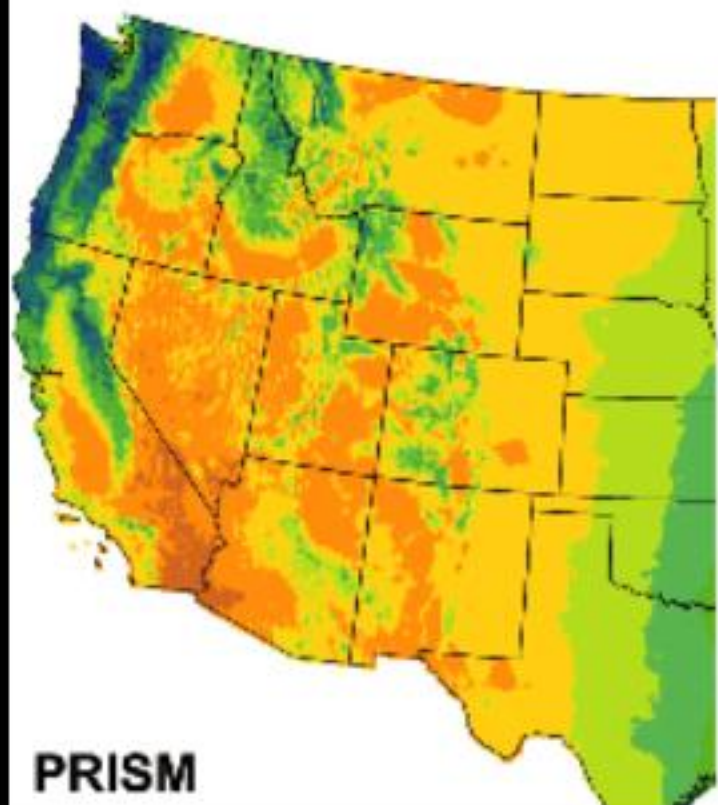
- PRISM
- ESRI's ArcView
- ESRI's ArcExplorer
- Java

About PRISM

- Analytical model
- Distributes point measurements to a geographic grid
- PRISM products derived from 4 km² grid
- PRISM products are GIS-compatible



Mean Annual Total Precipitation

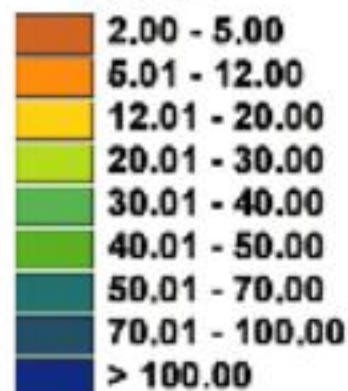


PRISM

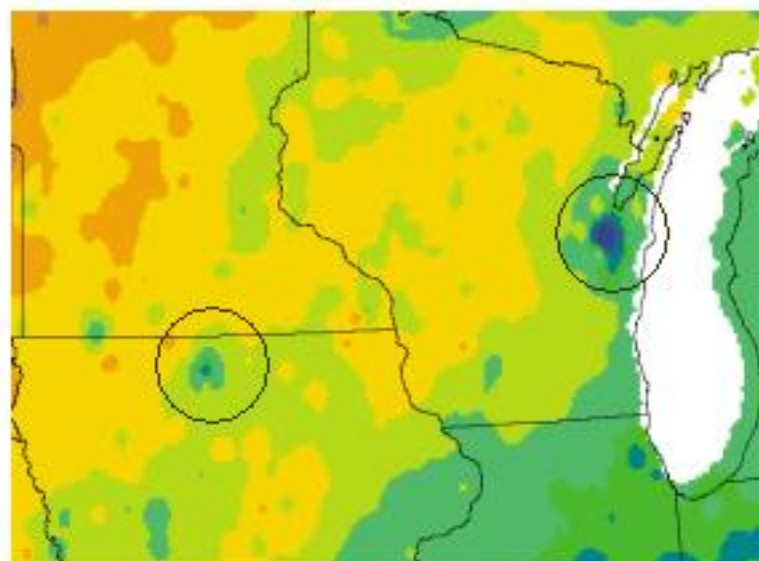


ArcView

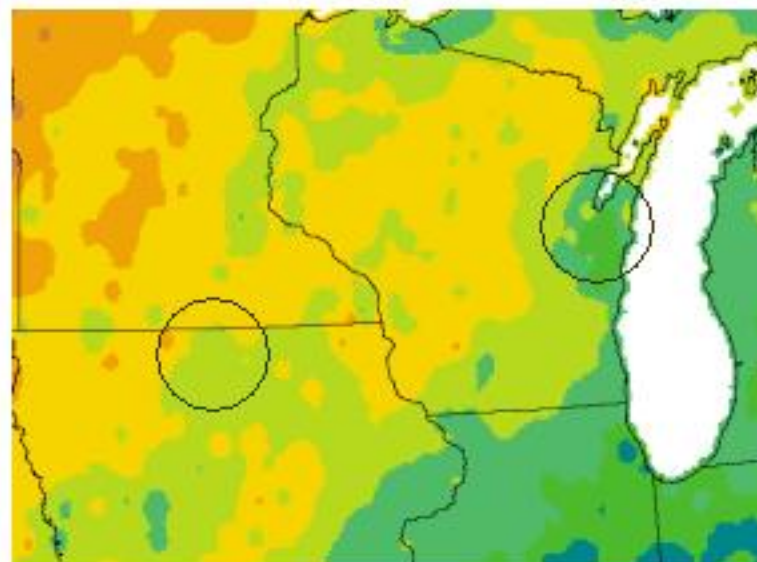
Inches



Greatest December Precipitation for 1961-1990

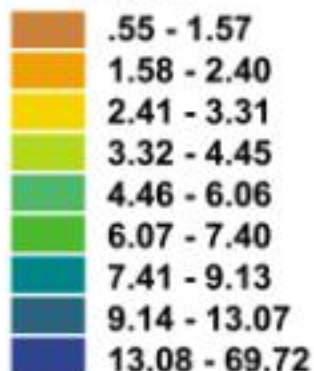


Uncorrected



Corrected

Inches



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Climate Atlas Products

Temperature

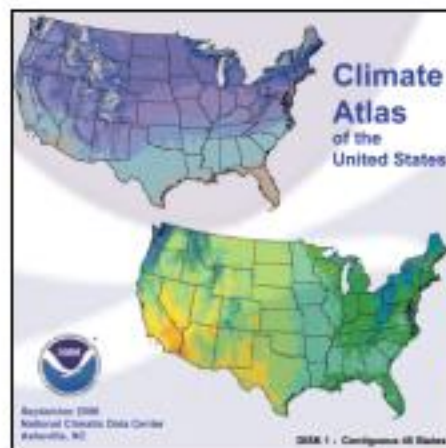
- Mean Max, Min, Avg & Range
- Mean Date of First & Last 32 F
- Mean Length of Freeze-Free
 - Period
- Mean Total Heating & Cooling
 - Degree Days
- Mean # Days Max Temp > 90 F
- Mean # Days Min Temp < 32 F
- Mean, Max, Min & Avg Dewpt
- Mean RH (%)
- Extreme (Record) Max & Min
 - Temp, HDD, CDD

Precipitation

- Mean Total Precip
- Mean # Days > 0.01"
- Greatest Daily Precip
- Greatest Monthly and
 - Annual Precip

Snow

- Greatest Daily, Monthly, &
 - Seasonal Snowfall
- Mean Snow Depth
- Mean # Days Snowfall >
 - 0.1", 1", 5" and 10"
- Mean # Days Snow Depth >
 - 1", 5" and 10"
- Mean Date of First/Last
 - Snowfall
- Probability of Receiving
 - Measurable Snowfall During a Winter Season
- Probability of a White
 - Christmas



737
Maps

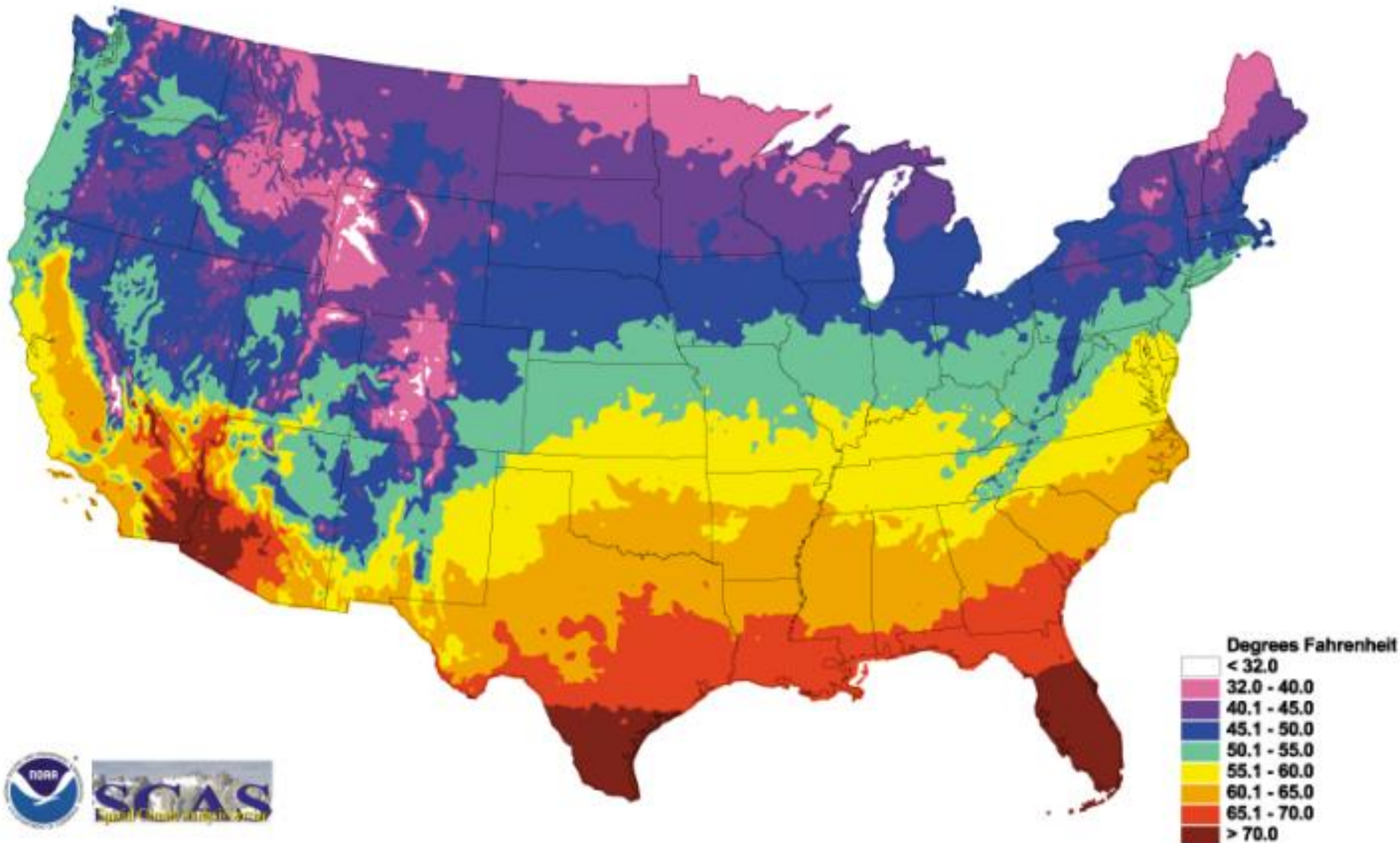
Other

- Mean Number of days With Freezing Rain, Heavy Fog, Thunderstorms, Hail, & Tornadoes
- Mean Sky Cover (Sunrise - Sunset)
- Mean Number of Clear, Ptlly Cldy & Cloudy Days (Sunrise - Sunset)
- Mean % of Possible Sunshine & Total Hours of Sunshine
- Prevailing Direction, Mean Speed, Fastest Mile of Wind, & Peak Gust
- Extreme 1%, 5% & 10% Wind Speeds
- Highest, Lowest and Mean Sea-Level Pressures, Monthly and Annual
- Frequency Occurrence of Visibility < 1/4, 1, 3, 10 and gt 10 Miles, Monthly and Annual
- U.S. Vegetation Index (Seasonal)
- Night Lights (DMSP)

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Annual Mean Daily Average Temperature



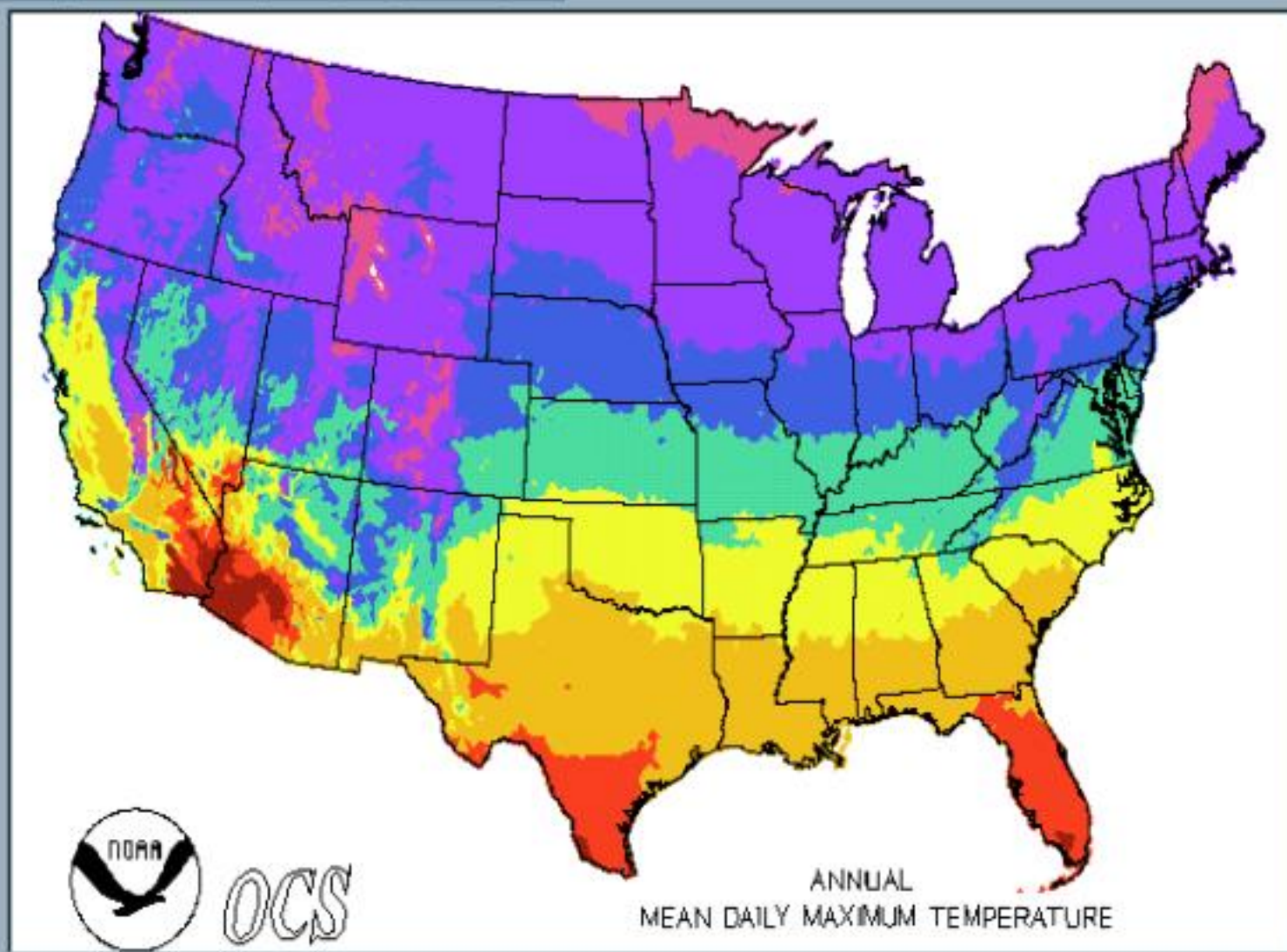
Climate Atlas Products: Interactive ArcExplorer



Local | WWW

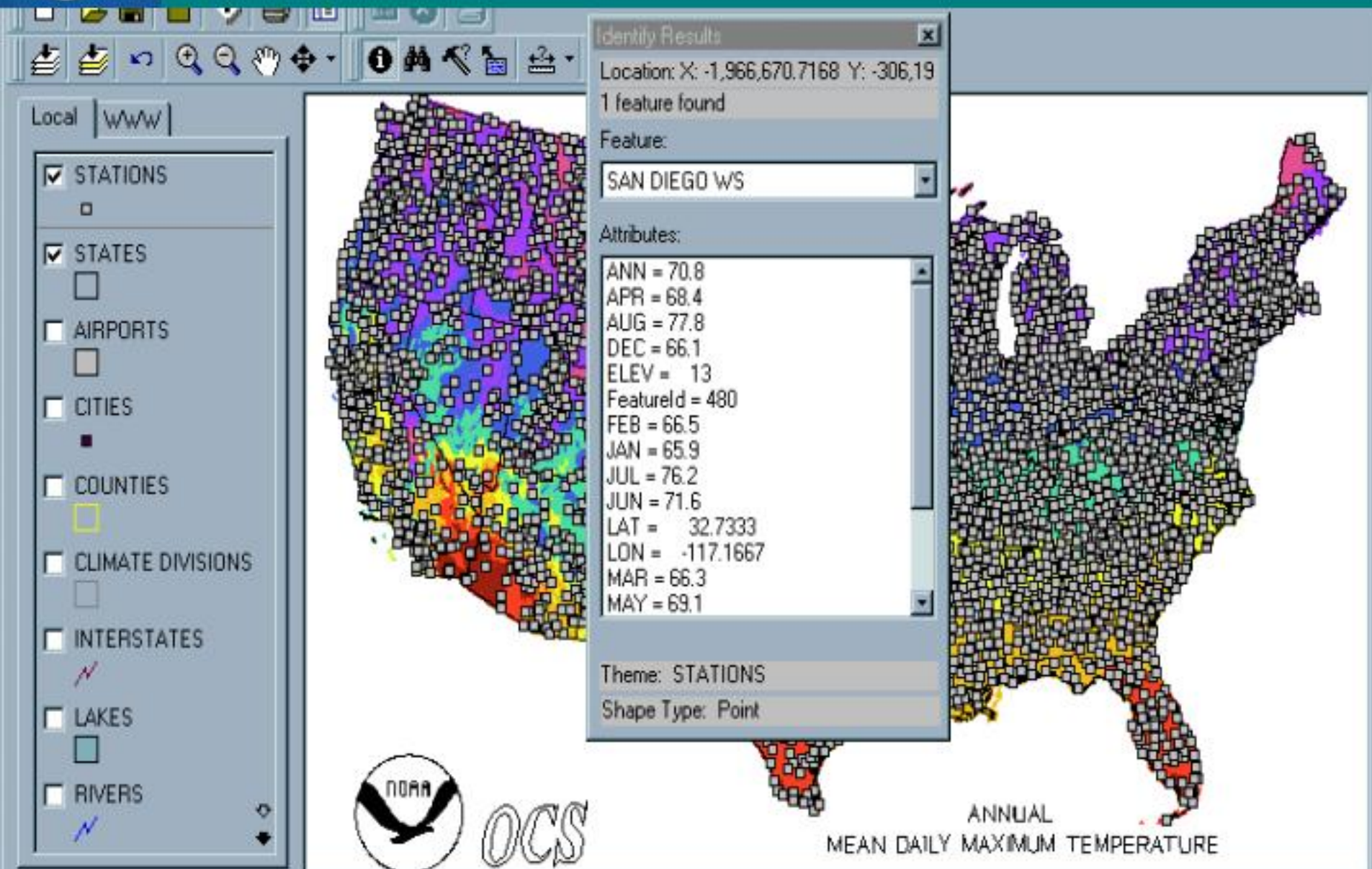
- 12 MEAN DAILY MAX T
 - DECEMBER -
 - A < 32.1
 - B 32.1 - 40.0
 - C 40.1 - 50.0
 - D 50.1 - 60.0
 - E 60.1 - 70.0
 - F 70.1 - 80.0
 - G 80.1 - 90.0
- 13 MEAN DAILY MAX T
 - ANNUAL -
 - A < 40.1
 - B 40.1 - 50.0
 - C 50.1 - 60.0
 - D 60.1 - 65.0
 - E 65.1 - 70.0
 - F 70.1 - 75.0
 - G 75.1 - 80.0
 - H 80.1 - 85.0
 - I > 85.0

TITLE
N

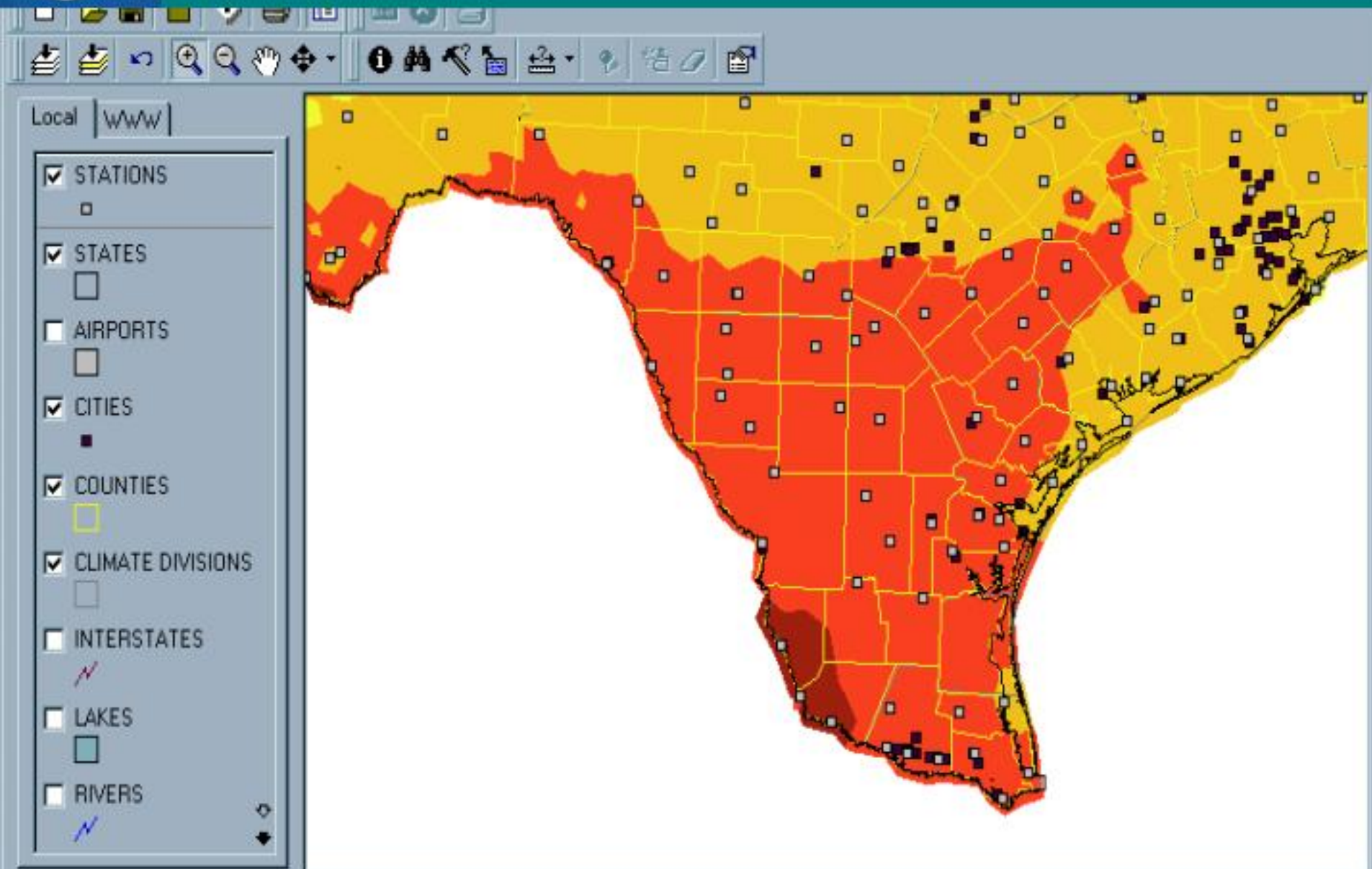


ANNUAL
MEAN DAILY MAXIMUM TEMPERATURE

Climate Atlas Products: Interactive ArcExplorer



Climate Atlas Products: Interactive ArcExplorer



Climate Atlas of the Contiguous United States

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For new Atlas FAQ's please visit [new Climate Atlas FAQ's](#)

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- [About ArcExplorer 1.1](#)
- [Credits](#)

This Atlas was produced by the [National Climatic Data Center \(NCDC\)](#), in Asheville, North Carolina. NCDC is a unit of the [National Oceanic and Atmospheric Administration \(NOAA\)](#), part of the [U.S. Department of Commerce](#).

<http://www.ncdc.noaa.gov/ol/about/cdrom/climatls/atlashelp.html>

Last updated 19 Oct 2000, by Lynn A. Goss

- Inclusion of Alaska and Hawaii into the Climate Atlas (Spring 2002)
- Web Access (Help, PDF/Shapefile)
- Development of interactive web atlas
 - User can customize maps by defining thresholds for elements and combinations of elements



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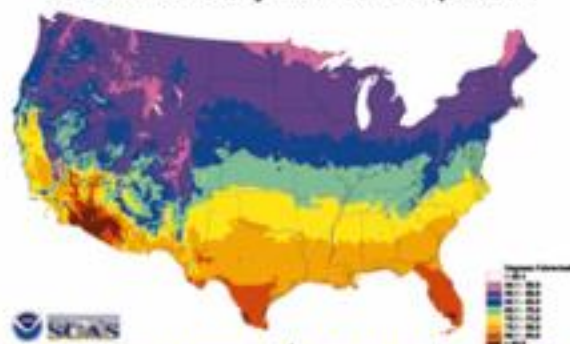
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Annual Mean Daily Maximum Temperature



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NCDC is the world's largest active archive of weather data. NCDC produces numerous climate publications and responds to data requests from all over the world. NCDC operates the [World Data Center for Meteorology, Asheville](#) which is collocated at NCDC. NCDC's web site has received a number of [awards](#).