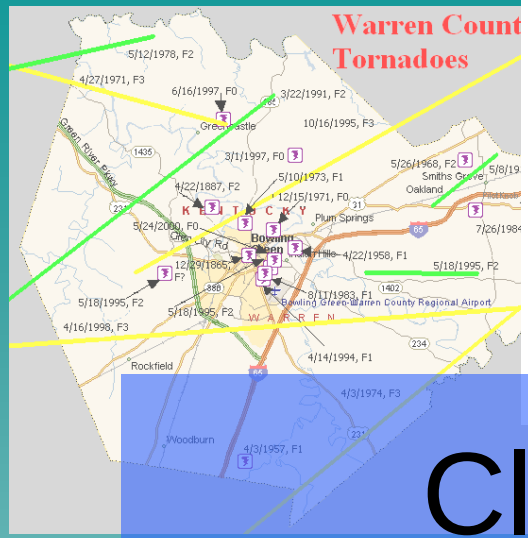
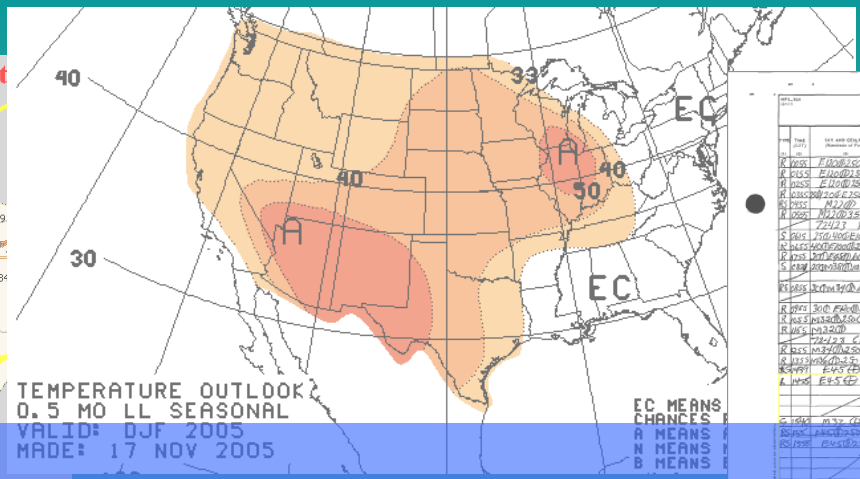
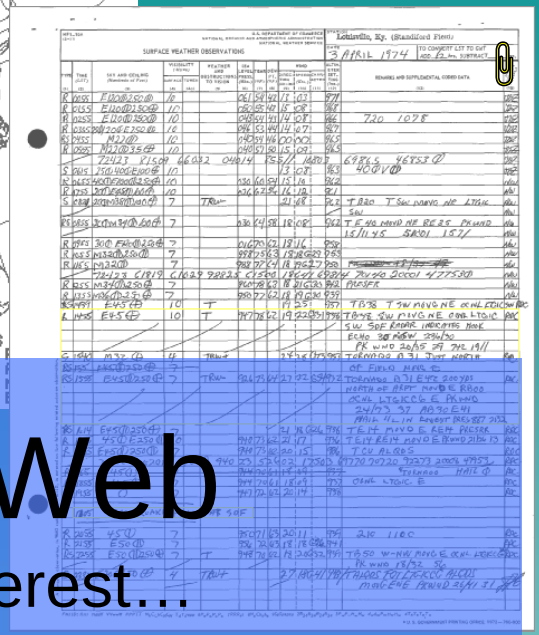
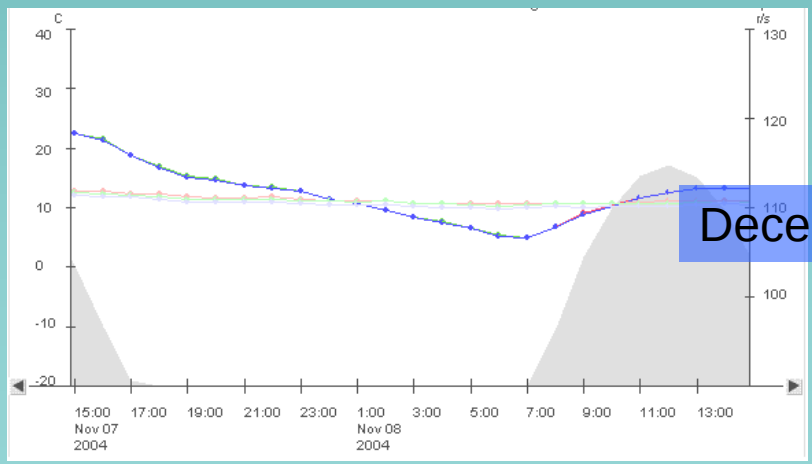




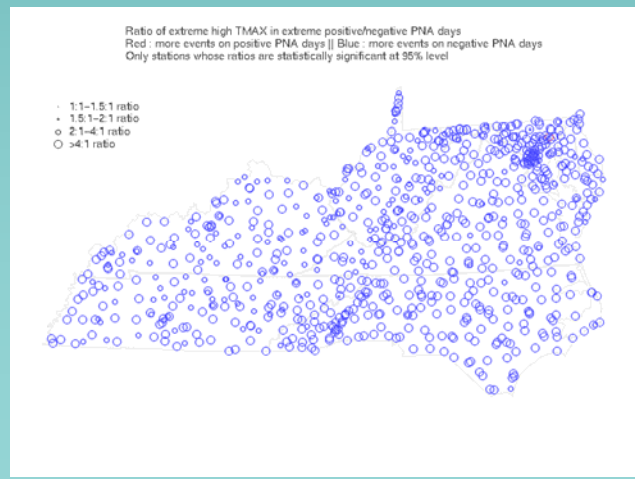


Climate on the Web

and a few other notes of interest…



December 2005

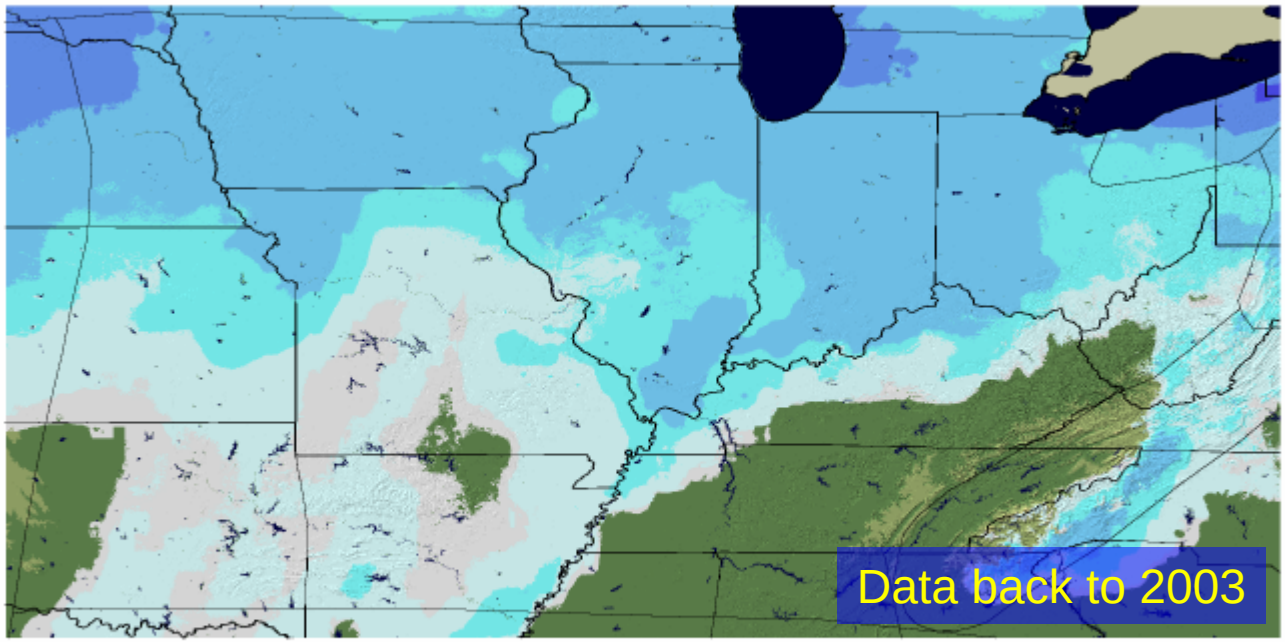


National Operational Hydrologic Remote Sensing Center

http://www.nohrsc.noaa.gov/

National Operational Hydrologic Remote Sensing Center

Satellite | Airborne Surveys | SHEF



http://www.nohrsc.noaa.gov/

NCDC Snow Climatology

http://www.ncdc.noaa.gov/ussc/mainpage.html

NCDC Snow Climatology

Number of Days with Daily Snowfall Amount >= 1.0".

BEREA 1 W, Kentucky

Month/Season	Mean	NYRS	Q1	Median	Q3
January	1.6	33	0.0	2.0	3.0
February	1.6	37	0.5	1.0	2.5
March	0.8	42	0.0	0.0	1.0
April	0.0	44	0.0	0.0	0.0
May	0.0	45	0.0	0.0	0.0
June	0.0	47	0.0	0.0	0.0
July	0.0	46	0.0	0.0	0.0
August	0.0	47	0.0	0.0	0.0
September	0.0	47	0.0	0.0	0.0
October	0.0	47	0.0	0.0	0.0
November	0.4	41	0.0	0.0	1.0
December	0.9	34	0.0	1.0	2.0

http://www.ncdc.noaa.gov/ussc/mainpage.html

NCDC Snow Climatology

Earliest, Latest, and Median Dates of the First 1.0" Snowfall.

BEREA 1 W, Kentucky

Month/Season	Earliest	Latest	Median	NYRS
January	1/01	1/29	1/10	28
February	2/01	2/23	2/08	32
March	3/01	3/31	3/08	20
April	NA	NA	NA	0
May	NA	NA	NA	0
June	NA	NA	NA	0
July	NA	NA	NA	0
August	NA	NA	NA	0
September	NA	NA	NA	0
October	NA	NA	NA	0
November	11/02	11/29	11/24	13
December	12/03	12/31	12/15	20
Winter	12/03	2/23	1/03	41
Spring	3/01	3/31	3/08	20
Summer	NA	NA	NA	0
Autumn	11/02	11/29	11/24	13
Annual	1/01	12/25	1/20	44
August-July	11/02	2/23	12/23	42

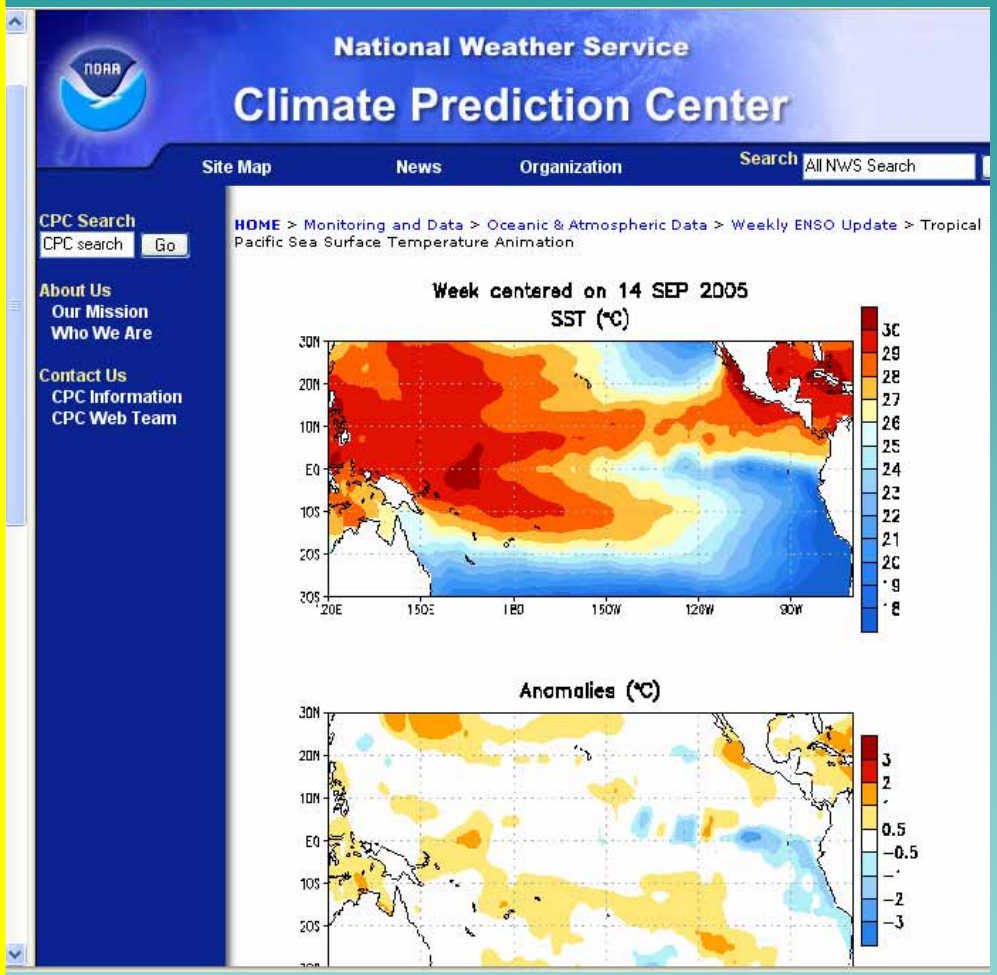
Dates = month/day.
NYRS = Number of Years with non-missing data.
NA = Not Applicable, or insufficient data to compute.

http://www.ncdc.noaa.gov/ussc/mainpage.html

CPC Briefing Page

Long Lead Briefing Sequence

1. **Power Point:** CDC, CPC
2. **Verifications:** Mon, Sea
3. **SST Anim:** Glbl, Pac, Atl/E Pac
4. **Hazards:** Text, 200mb Hghts, 200mb Winds, 850mb Winds, OLR, Wind/Storm OBS
5. EQPAC T-Depth Plot
6. **EQPAC T-Depth Anim:** Wk, Mon
7. **ENSO Bull:** Text, Fig 1, Fig 2, Fig 3, Fig 4
8. Sea Level Anim
9. TAO Data Plots
10. **7d SST:** Pac, Atl/E Pac
11. **Obs P:** 1/7d, 30d, 90d
12. **Z Loops:** NH, Globe
13. Indices
14. **Rivers:** Map, Table
15. Cities Temp
16. Cities Precip
17. OCN, EOCN
18. ENS CCA
19. Soil Mst Mon & Pred
20. **CAS:** Mon, Sea, Skill, IC, Soil F
21. **SST CA:** Menu, 500mb, Temp, Prec, SST



http://www.cpc.ncep.noaa.gov/products/predictions/90day/tools/briefing/index.html

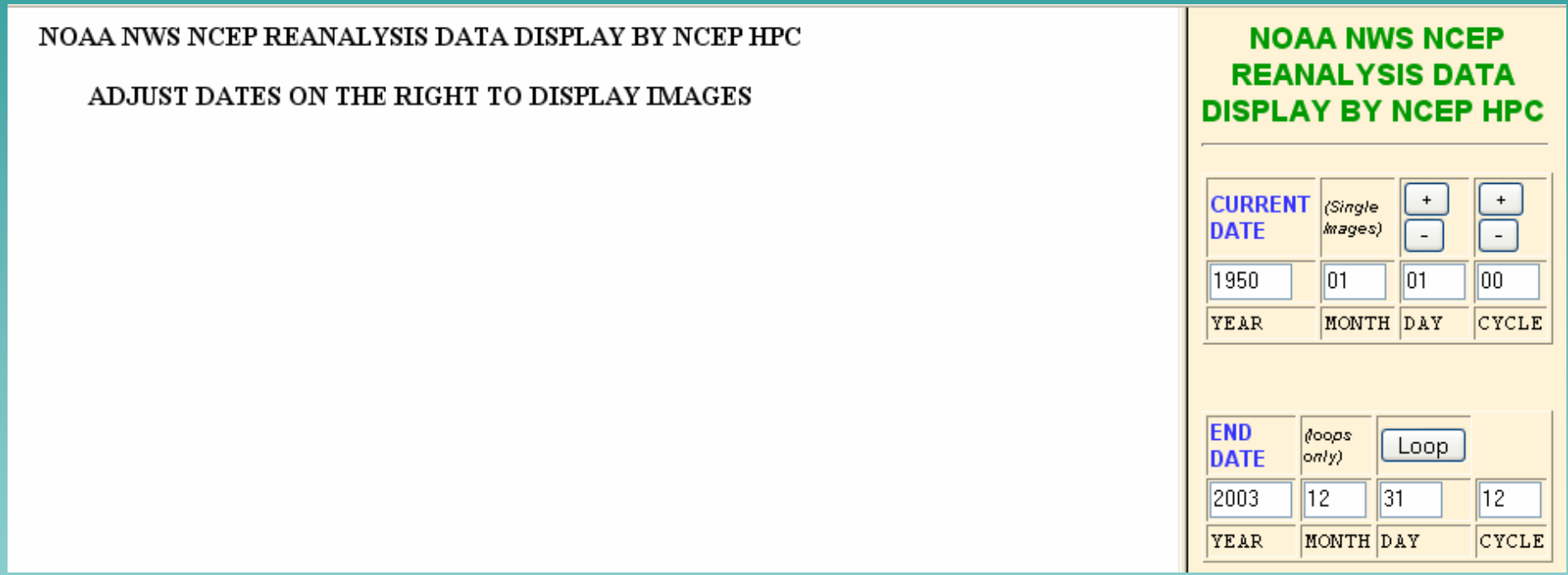
CPC Briefing Page

Tons of information, including:

- Pacific, Atlantic, and global SST and anomaly animations of past three months
- Forecast verifications
- Principal storm tracks past couple of weeks and upcoming week
- ENSO Diagnostic discussion, including SST anomalies and chart of model forecasts and spread
- Observed precip for time periods up to past 90 days
- 500HPa height anomaly loops for NH and globe
- Forecasts from the many different models CPC uses
- NH 500HPa heights and anomalies back to 1979
- CPC Forecast archive back to 1995

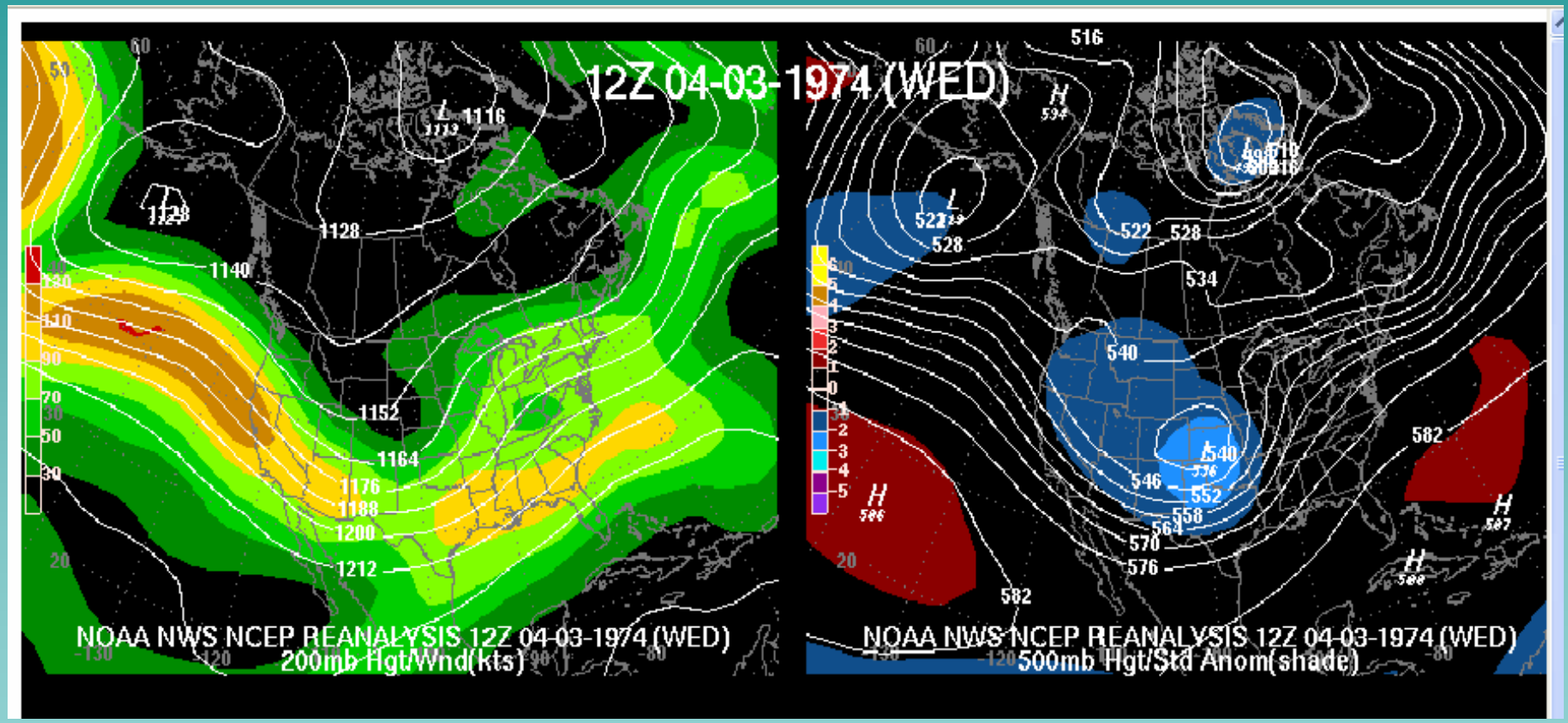
http://www.cpc.ncep.noaa.gov/products/predictions/90day/tools/briefing/index.html

Past Weather Patterns



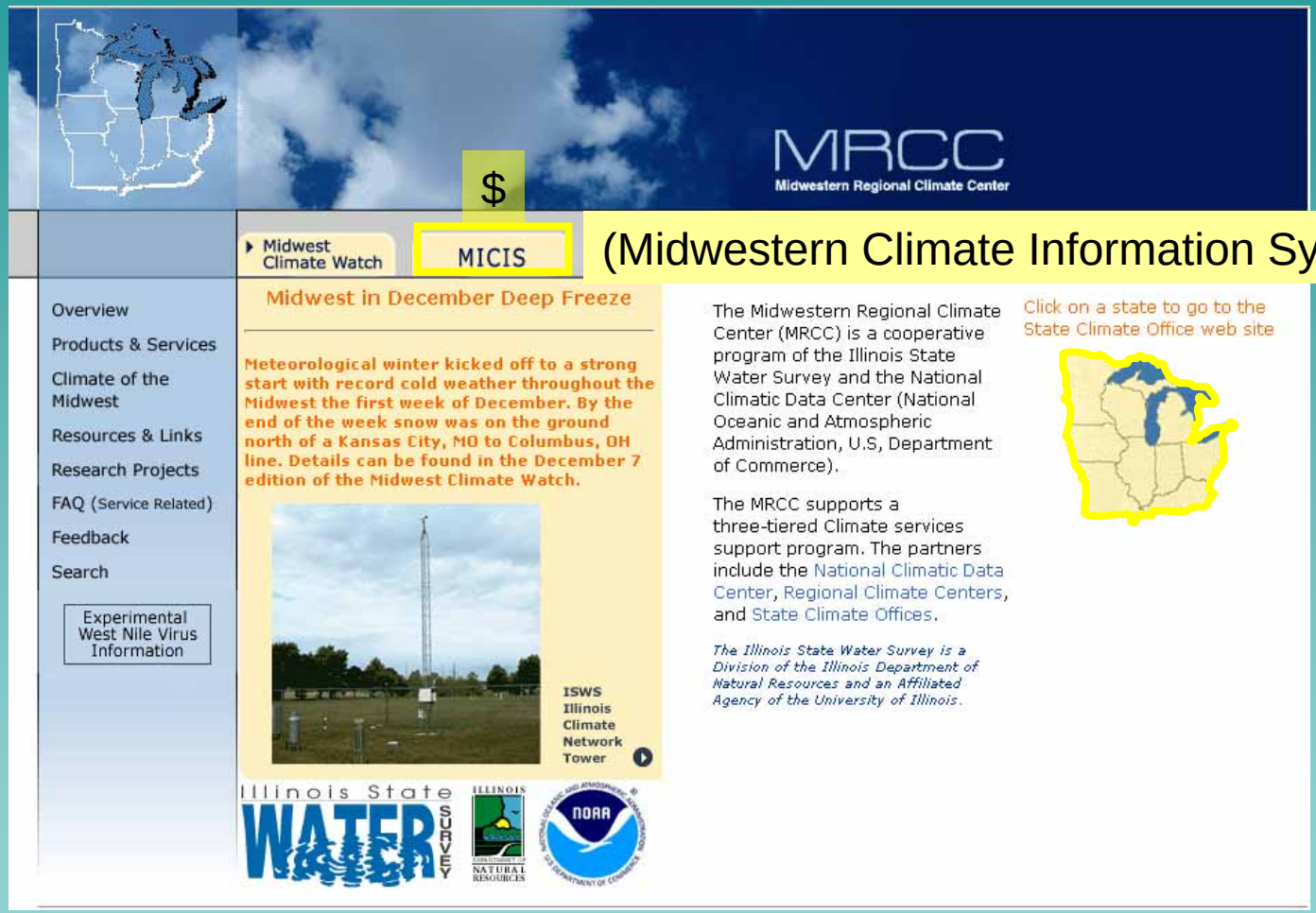
http://www.hpc.ncep.noaa.gov/ncepreanal/

Past Weather Patterns



http://www.hpc.ncep.noaa.gov/ncepreanal/

Midwest Regional Climate Center



http://mcc.sws.uiuc.edu/

Midwest Regional Climate Center

Daily Climate Data between Two Dates

From the Midwestern Regional Climate Center

STATION: BARDSTOWN, KY (Station ID: 150389)

Year	Mo	Dy	Low (F)	High (F)	Degree Days
1911	11	01	44	61	12
1911	11	02	25	56	24
1911	11	03	23	45	31
1911	11	04	31	49	25
1911	11	05	37	44	24
1911	11	06	44	59	13
1911	11	07	45	72	6
1911	11	08	38	62	15
1911	11	09	42	49	19
1911	11	10	45	57	14
1911	11	11	56	66	4
1911	11	12	24	75	15
1911	11	13	14	27	44
1911	11	14	27	42	30
1911	11	15	31	50	24
1911	11	16	28	60	21
1911	11	17	35	60	17
1911	11	18	32	68	15
1911	11	19	32	50	24
1911	11	20	38	48	22
1911	11	21	28	52	25

http://mcc3.sws.uiuc.edu/cgi-bin/greet.cgi

Midwest Regional Climate Center

Threshold Search for Runs of Special Events

From the Midwestern Regional Climate Center

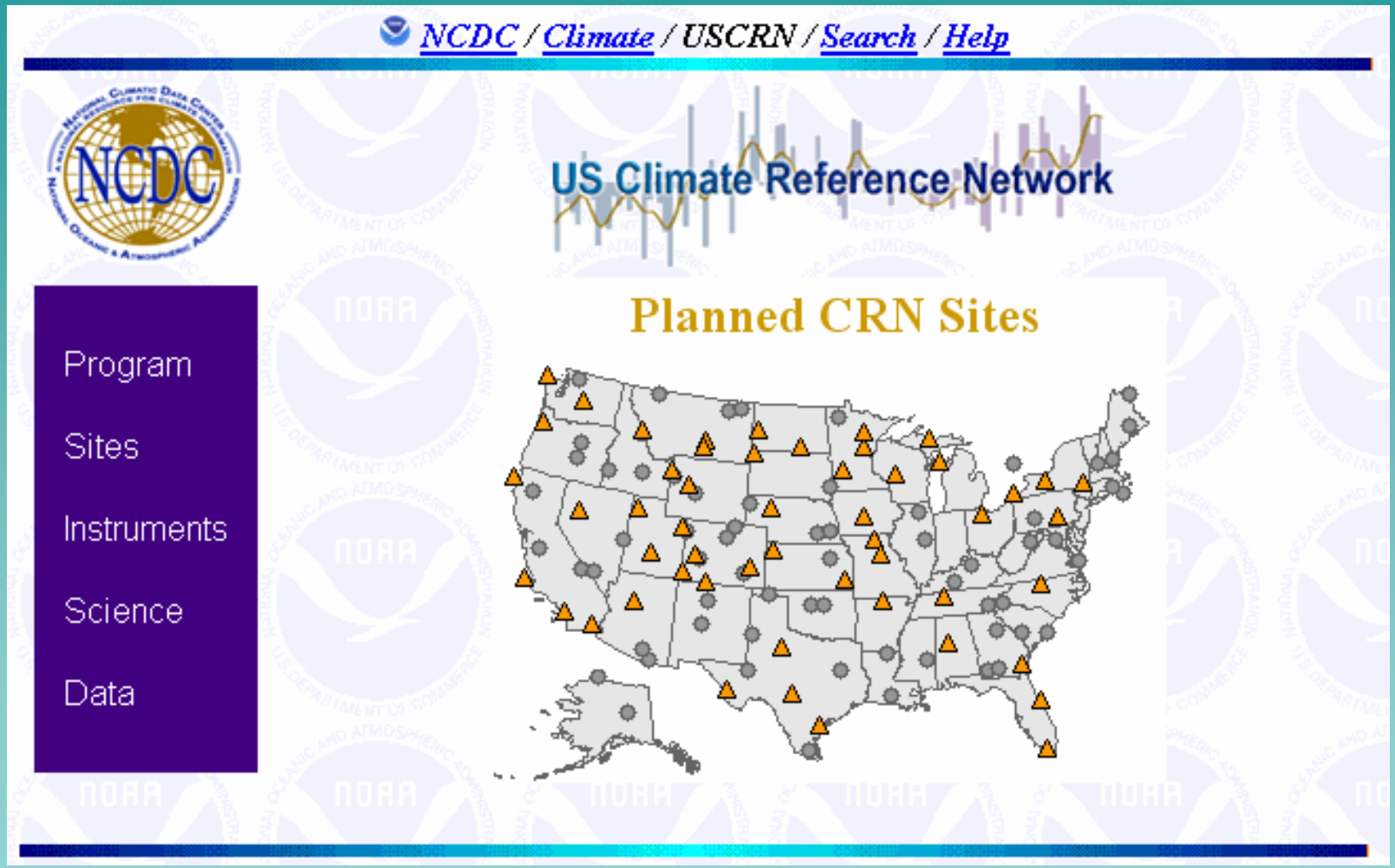
```
                        BARDSTOWN
  years  1888 to 2005     month  1 day  1  to  month 12 day 31

  Conditions are :
     Maximum Temperature     less than or equal to          32 deg F

<-------Time Period-------->    # of days
02/06/1899   to   02/14/1899        9
```

http://mcc3.sws.uiuc.edu/cgi-bin/greet.cgi

U.S. Climate Reference Network



http://www.ncdc.noaa.gov/oa/climate/uscrn/

U.S. Climate Reference Network

USCRN

Station Information:

KY Versailles 3 NNW

University of Kentucky (Woodford County Site)

Select Station from Map

Change Date/Time

Period of record is
Nov 20 2001
to Dec 10 2005

Dec 10 2005 7:00 PM US/Eastern

Calculated Temperature: 30.7°F / -0.7°C

Calculated Precipitation: 0.00 in / 0.0 mm

Last 12 Hours

Sensor Data

Daily Summary

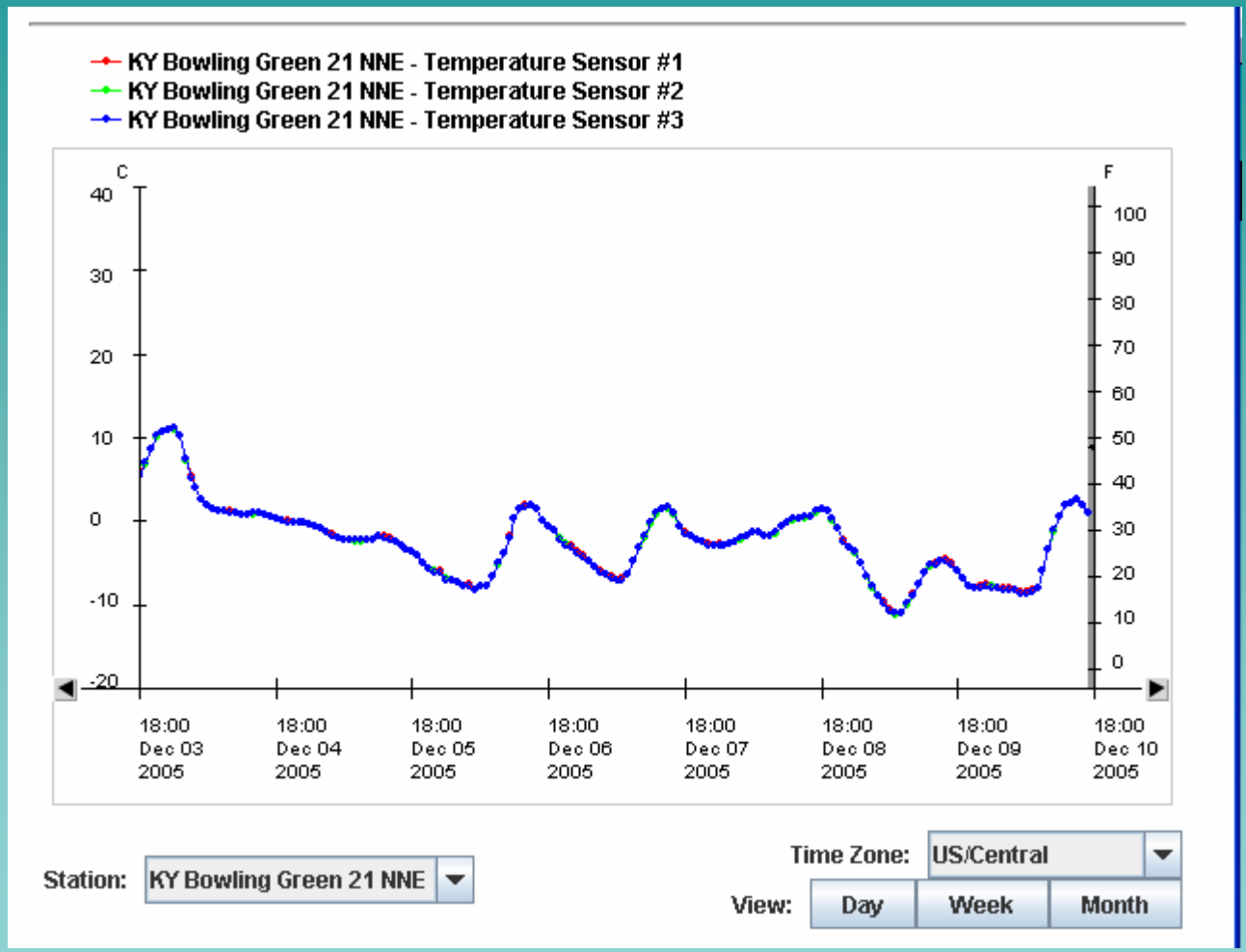
Monthly Summary

List All Stations

Daily, weekly, and monthly graphs of temperature, precipitation, wind speed, and RH

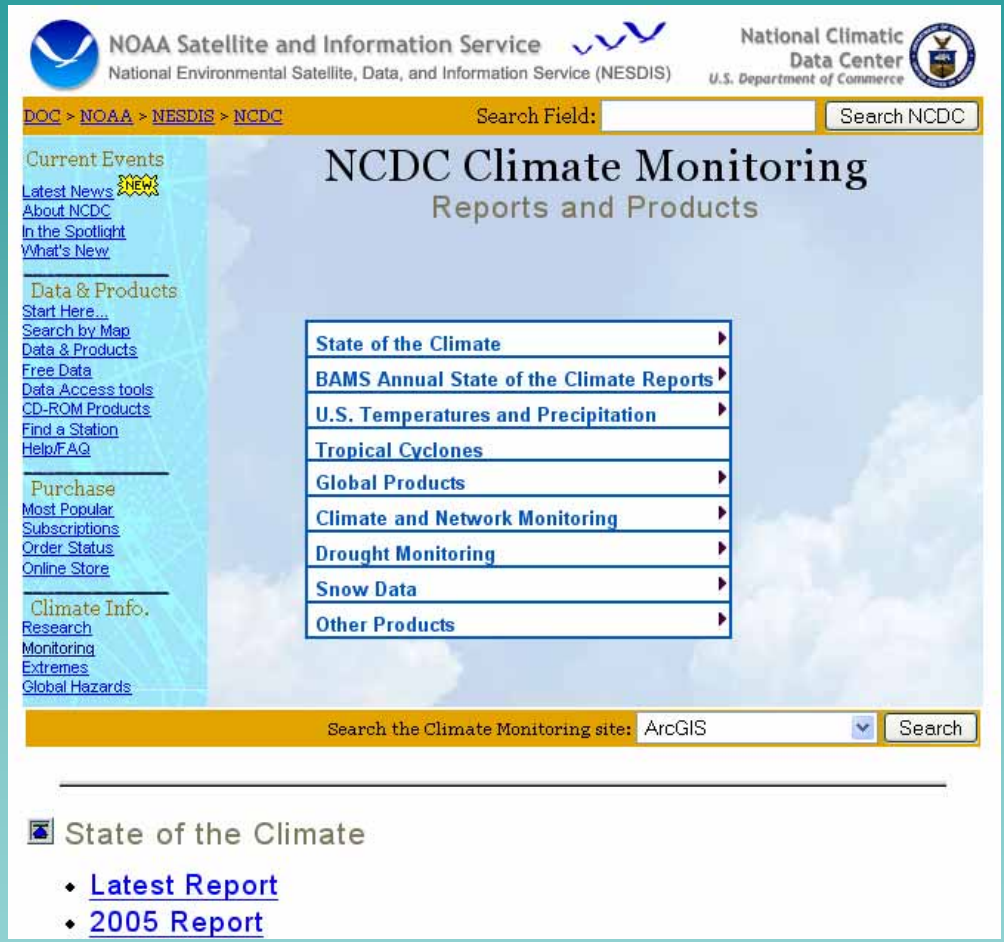
http://www.ncdc.noaa.gov/oa/climate/uscrn/

U.S. Climate Reference Network



http://www.ncdc.noaa.gov/oa/climate/uscrn/

NCDC Climate Monitoring



http://www.ncdc.noaa.gov/oa/climate/research/monitoring.html

NCDC Climate Monitoring

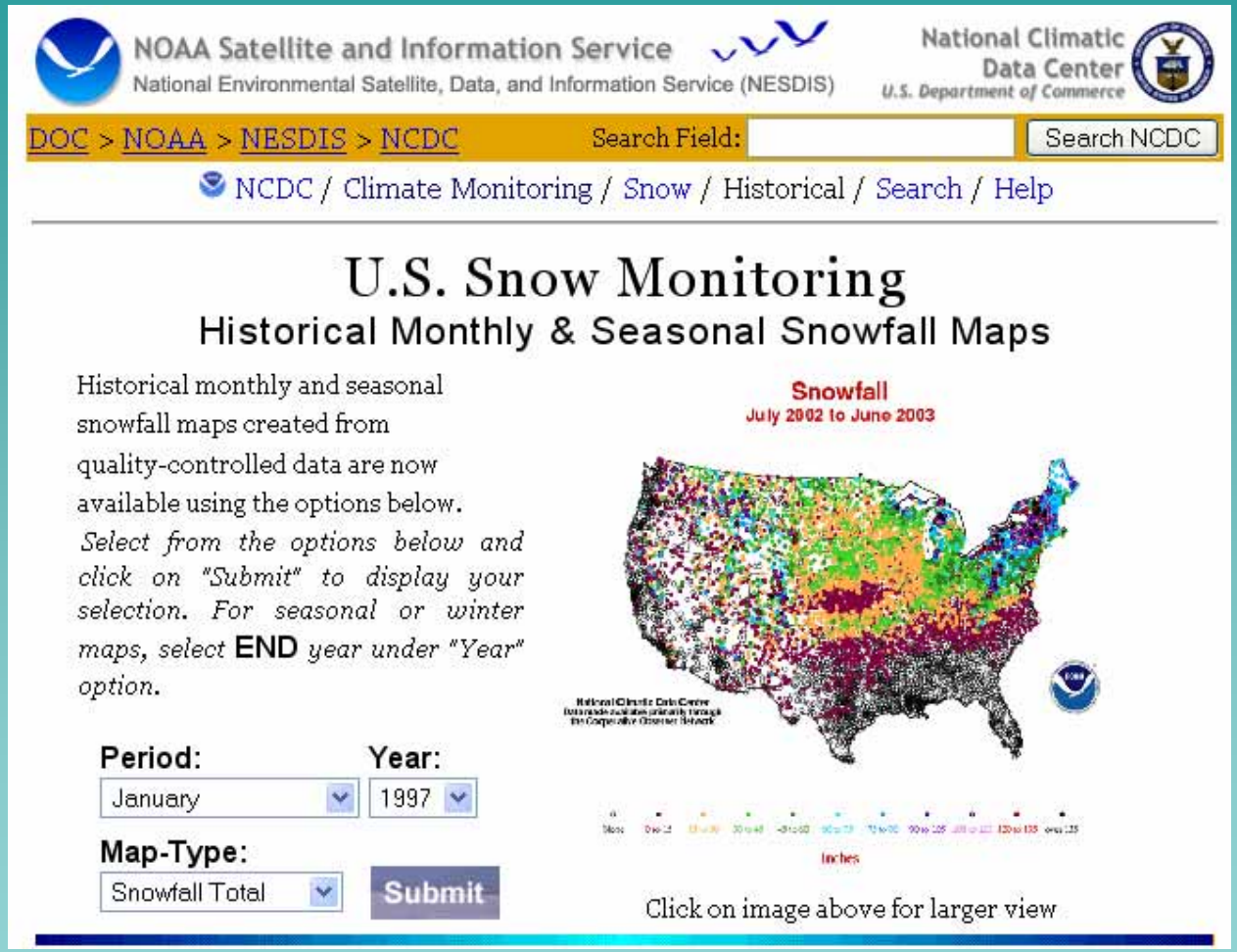
Monthly Teleconnection Indices

- Southern Oscillation Index
- SST Anomalies in Nino 3.4 and 4 Regions
- Outgoing Longwave Radiation
- Pacific Decadal Oscillation
- North Atlantic Oscillation
- Arctic Oscillation
- Pacific-North America Index

One-stop shopping for teleconnection indices

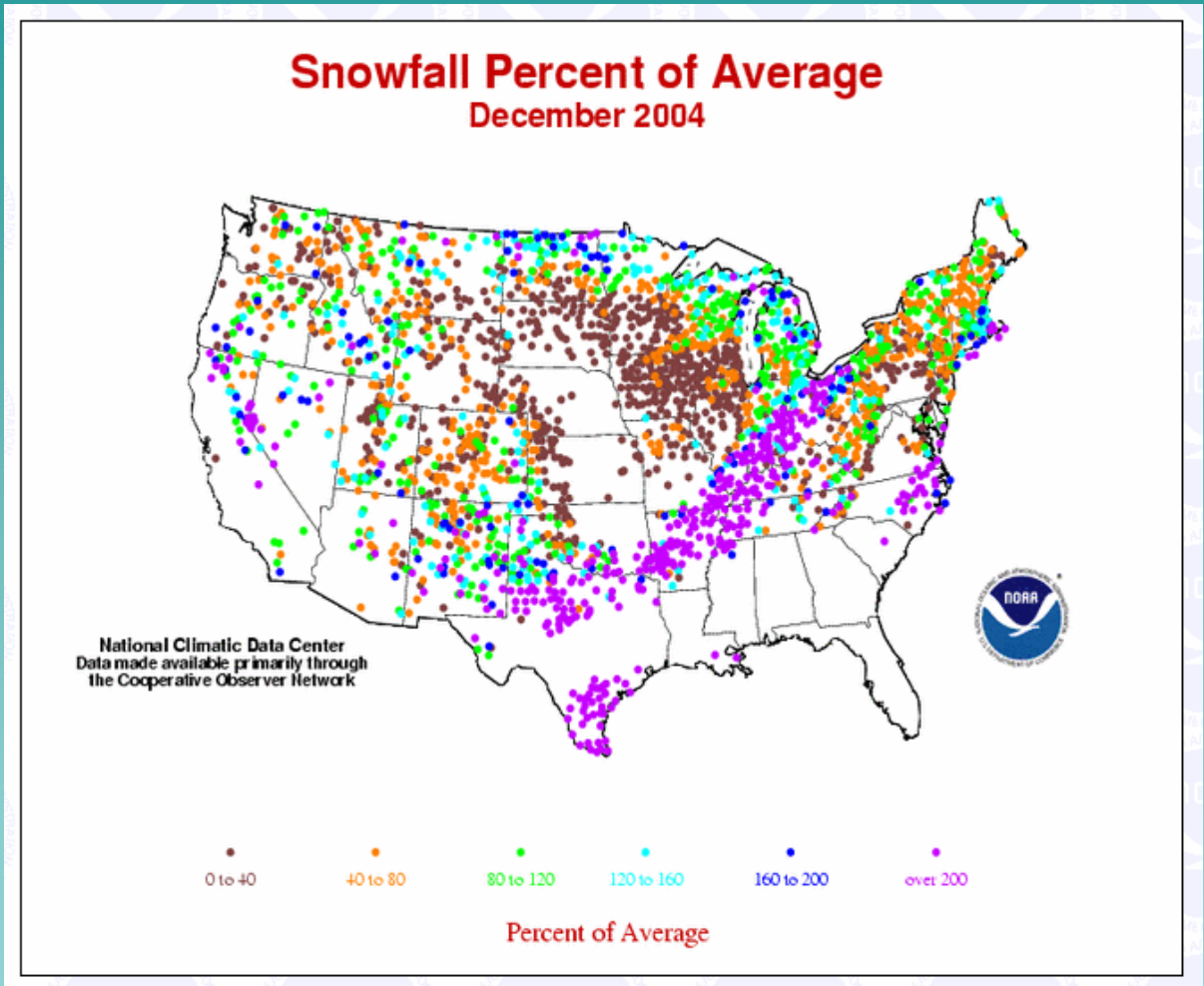
http://www.ncdc.noaa.gov/oa/climate/research/teleconnect/teleconnect.html

NCDC Climate Monitoring



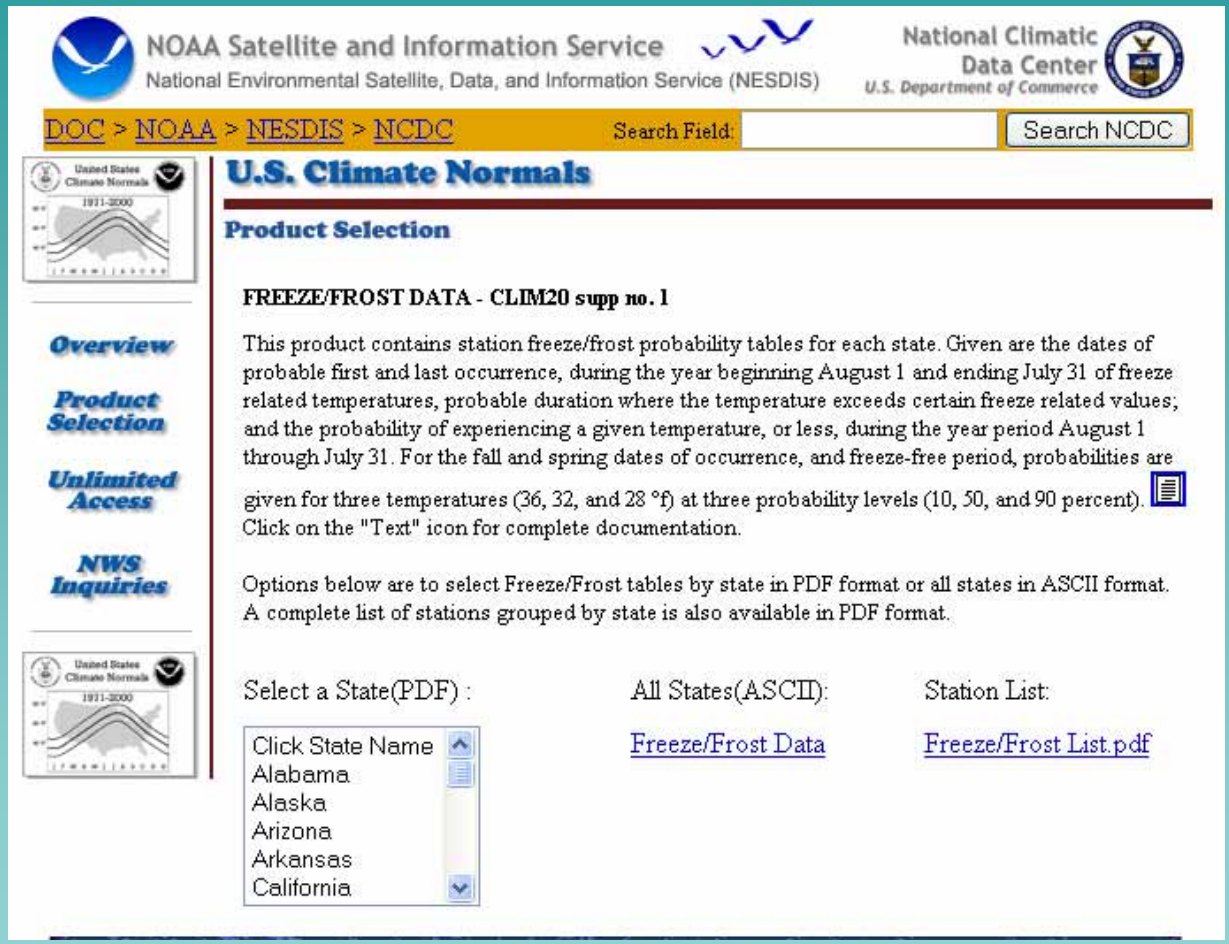
http://www.ncdc.noaa.gov/oa/climate/research/snow/historical.html

NCDC Climate Monitoring



http://www.ncdc.noaa.gov/oa/climate/research/snow/historical.html

NCDC Climate Monitoring



http://www5.ncdc.noaa.gov/cgi-bin/climatenormals/climatenormals.pl?directive=prod_select2&prodtype=CLIM2001&subrnum=

NCDC Climate Monitoring

Freeze / Frost Occurrence Data

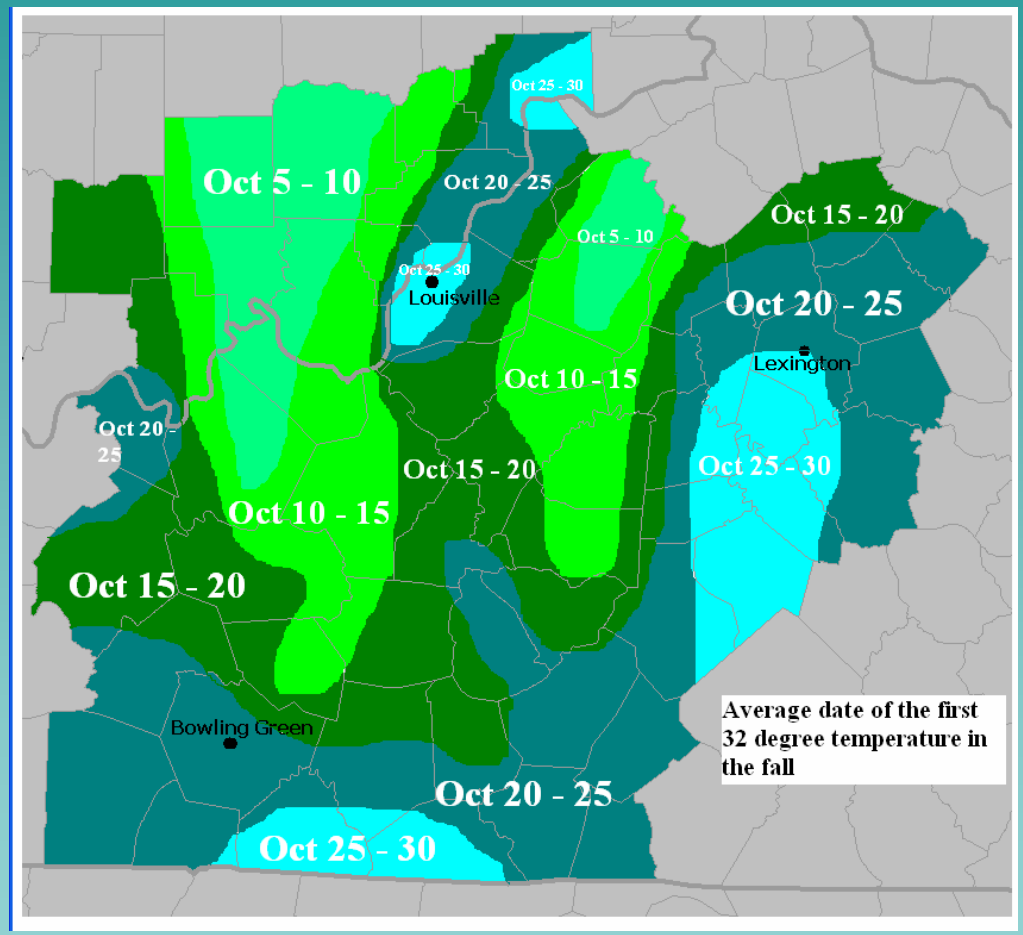
All probabilities in whole percent. See notes for probability level description.

- Indicates the probability of occurrence of threshold temperature is less than indicated probability.

State And Station Name	Threshold (F)	Spring (Date)			Fall (Date)			Freeze Free Period (Days)		
		Probability Level (1)			Probability Level (2)			Probability Level (3)		
Kentucky		90	50	10	10	50	90	10	50	90
ASHLAND	36 32 28	Apr22 Apr16 Apr02	May14 May04 Apr21	Jun05 May21 May10	Sep12 Sep28 Oct06	Sep30 Oct13 Oct23	Oct18 Oct27 Nov09	167 185 211	139 161 184	111 137 158
BARBOURVILLE	36 32 28	Apr20 Apr09 Mar24	May03 Apr24 Apr06	May17 May08 Apr19	Sep26 Oct09 Oct12	Oct10 Oct22 Oct31	Oct24 Nov04 Nov19	179 199 228	159 181 208	139 163 187
BARDSTOWN 5 E	36 32 28	Apr12 Apr03 Mar22	May01 Apr20 Apr05	May19 May06 Apr20	Sep24 Oct03 Oct11	Oct06 Oct16 Oct27	Oct18 Oct29 Nov12	178 201 223	158 179 204	138 157 186
BARDWELL 2 E	36 32 28	Apr03 Mar27 Mar15	Apr19 Apr09 Mar30	May05 Apr21 Apr14	Sep30 Oct03 Oct22	Oct10 Oct19 Nov08	Oct21 Nov04 Nov25	192 211 245	174 192 222	156 174 199
BARREN RIVER LAKE	36	Apr11	Apr29	May17	Sep29	Oct12	Oct24	186	165	144

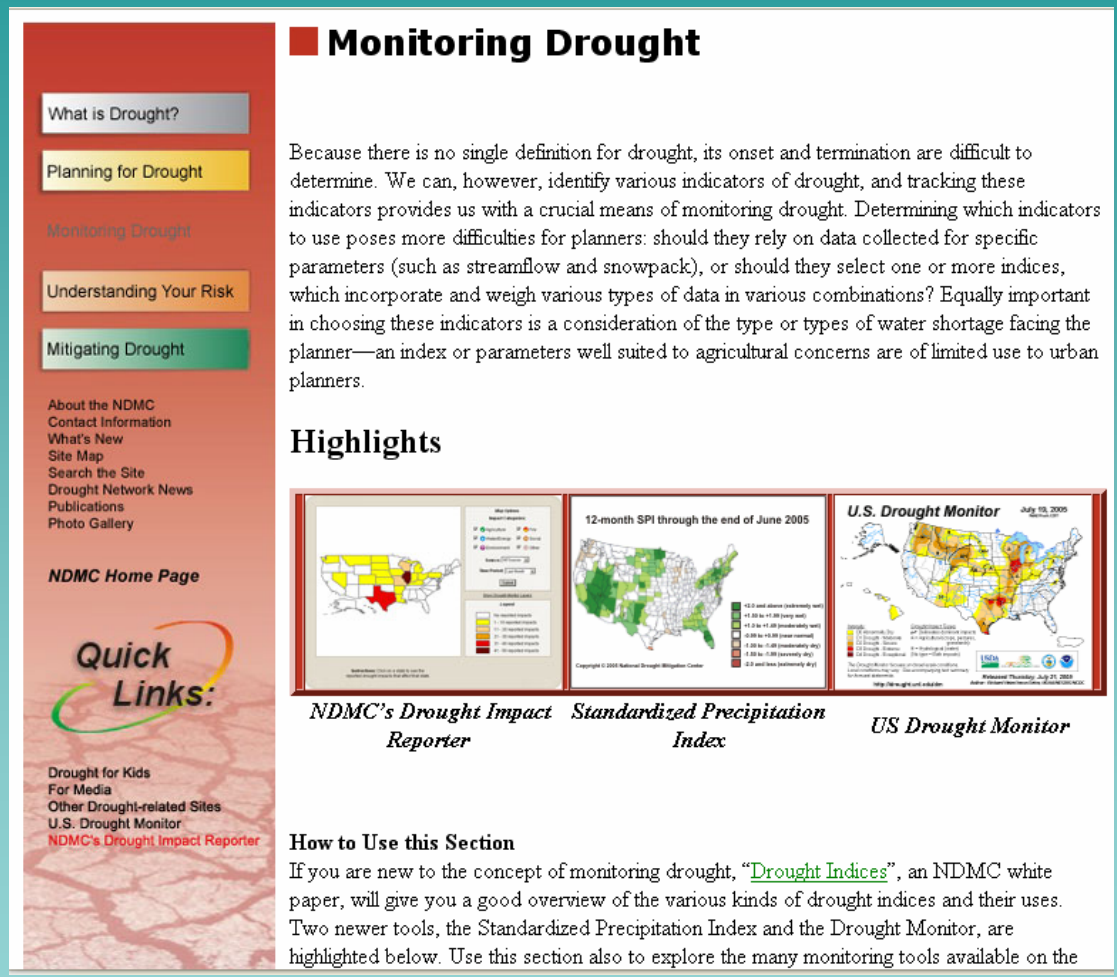
http://www5.ncdc.noaa.gov/climatenormals/clim20supp1/states/KY.pdf

Frost/Freeze Maps



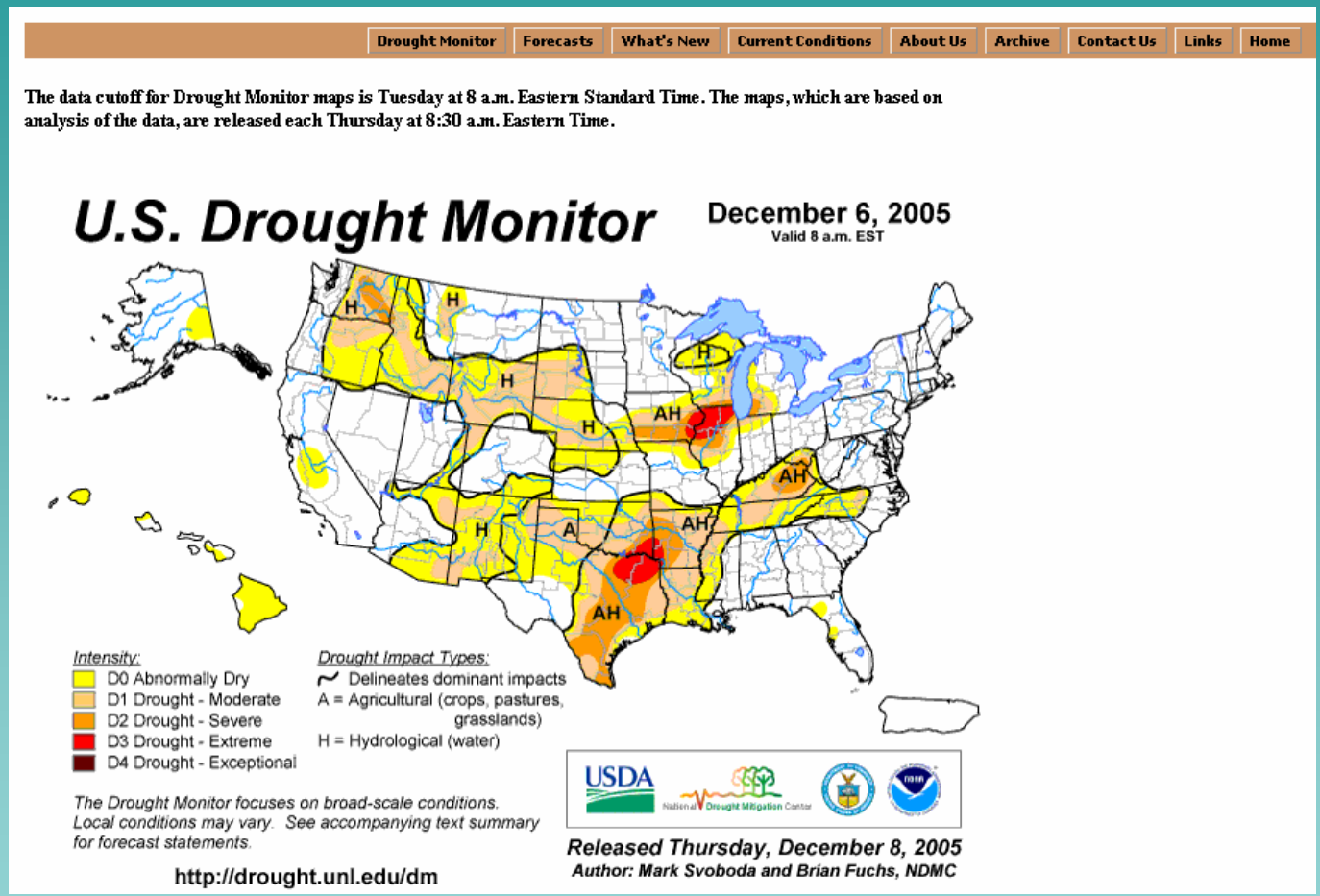
http://www.crh.noaa.gov/lmk/?n=frostfreeze

UNL Drought Source



http://drought.unl.edu/monitor/monitor.htm

UNL Drought Source

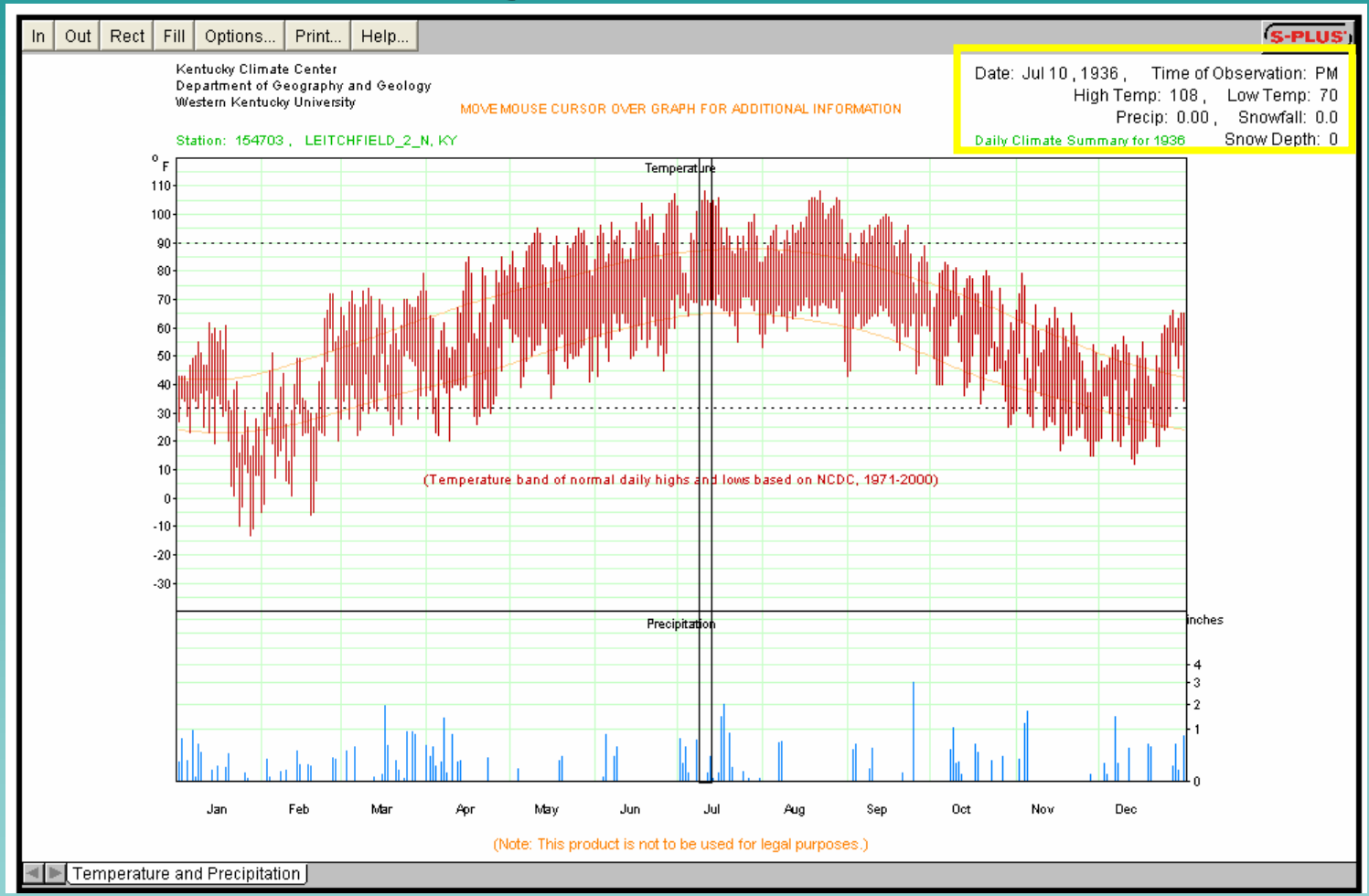


http://drought.unl.edu/dm/monitor.html

Kentucky Climate Center

http://kyclim.wku.edu/

Kentucky Climate Center

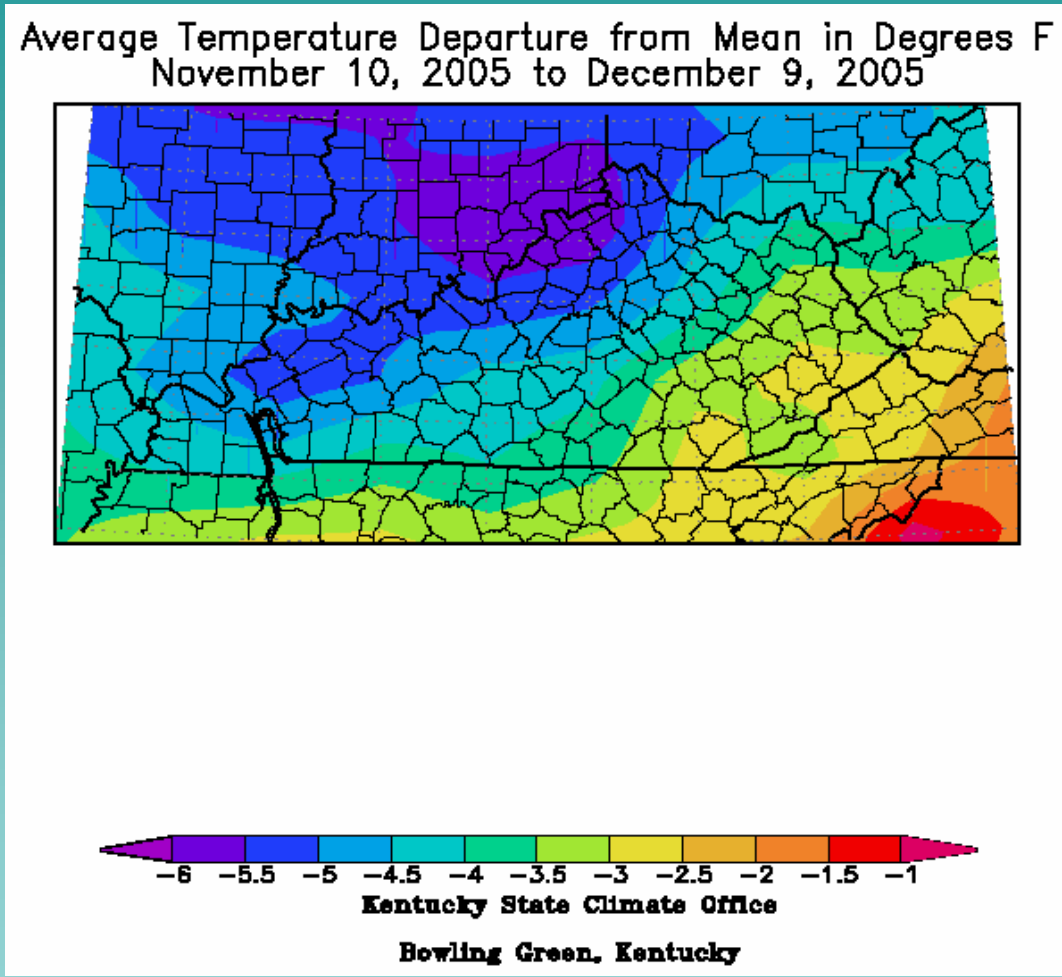


http://kyclim.wku.edu/DCG.html

Kentucky Climate Center – “Climate Watch”

http://kyclim.wku.edu/climWatch.htm

Kentucky Climate Center – “Climate Watch”

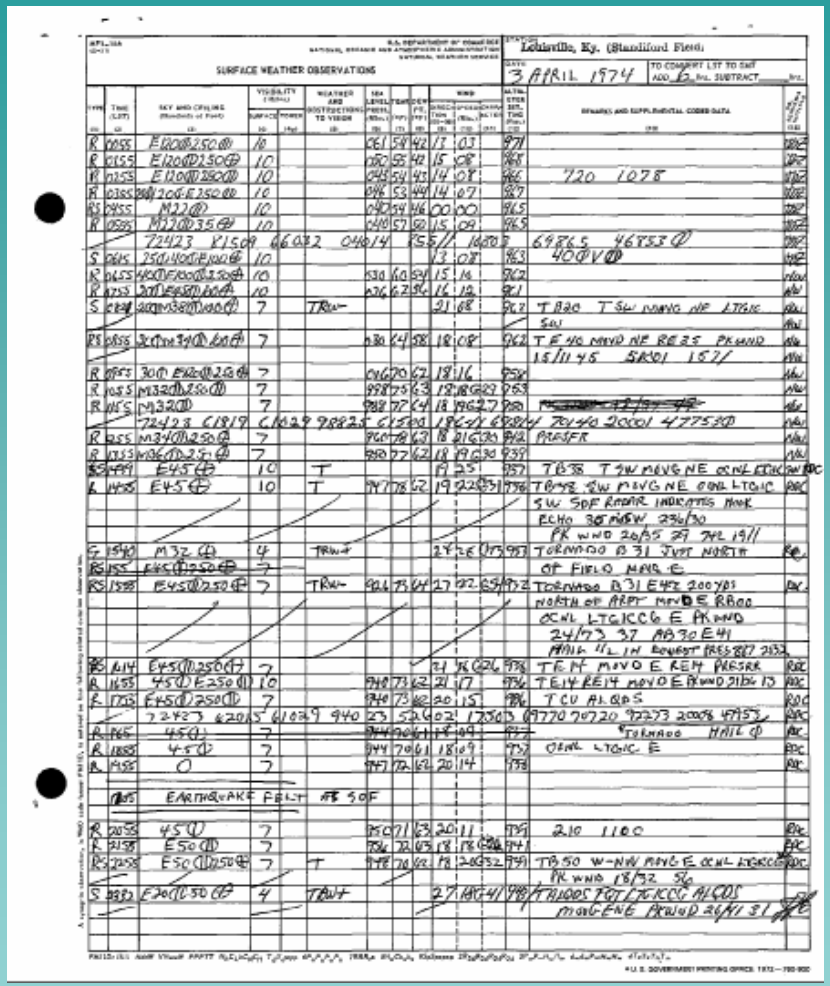


http://kyclim.wku.edu/climWatch.htm

WSSRD

http://noaa.imcwv.com/

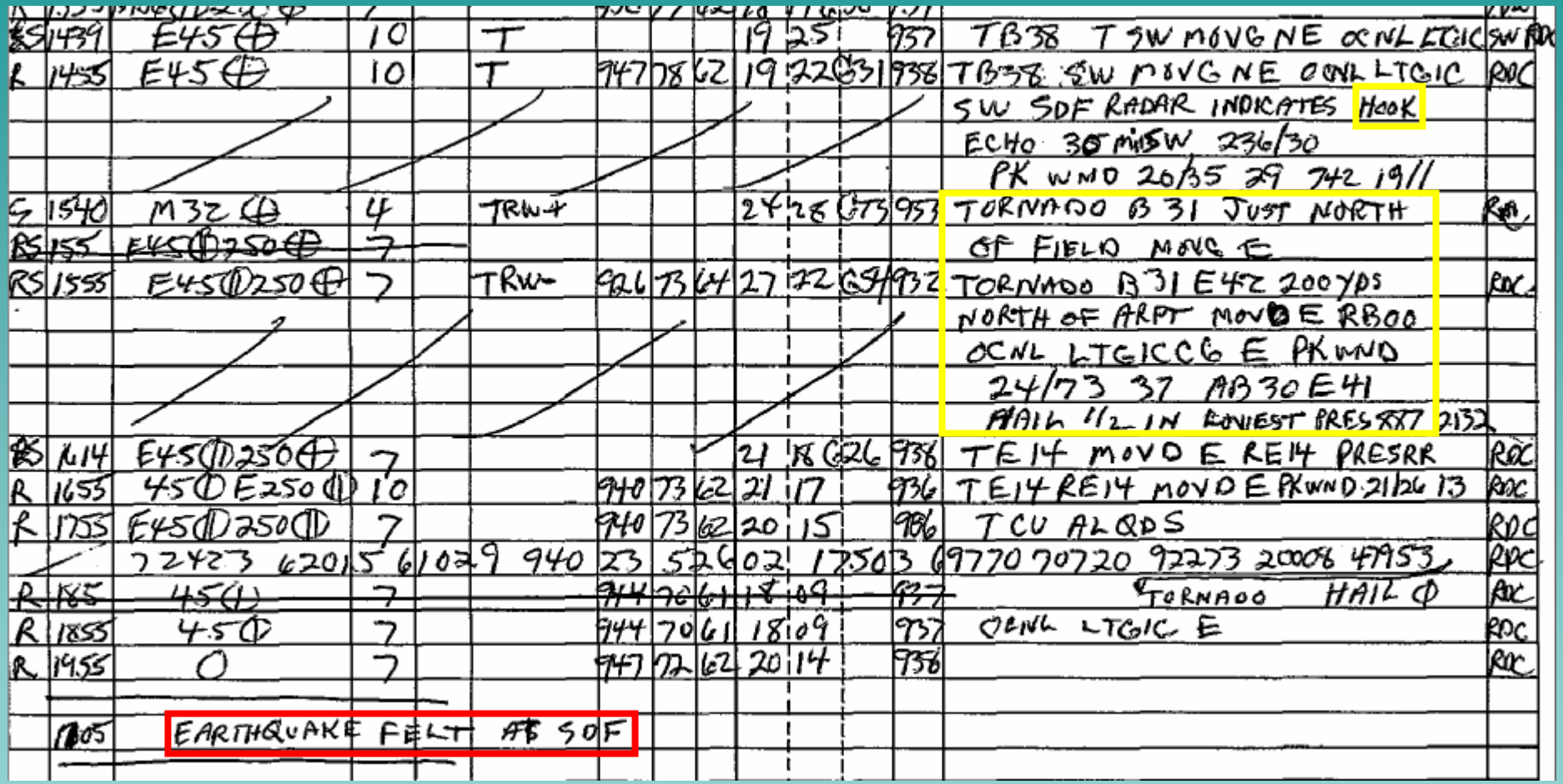
WSSRD



MF1-10
April 3, 1974
Louisville KY

http://noaa.imcwv.com/

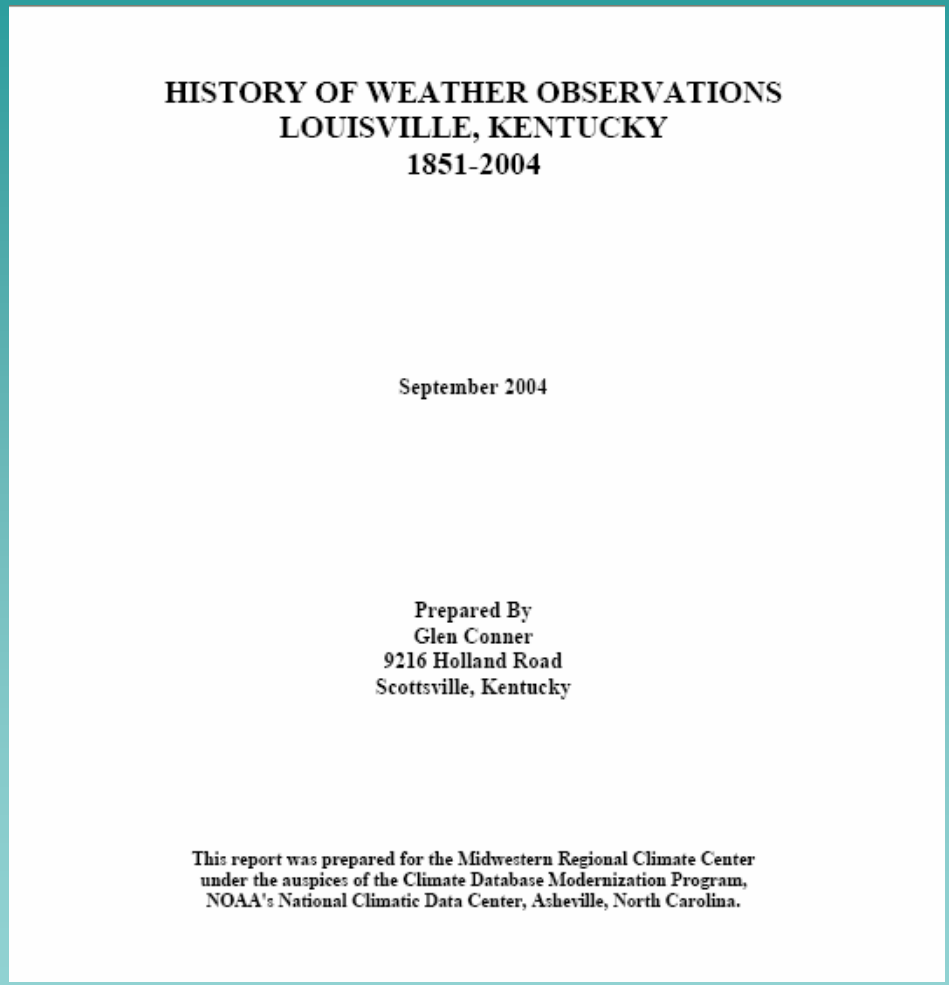
WSSRD



S	1439	E45 ⊕	10	T				19	25		937	TB38 T SW MOVG NE OCNL LTGIC	SW RDC
R	1455	E45 ⊕	10	T	947	78	62	19	22	31	938	TB38 SW MOVG NE OCNL LTGIC	RDC
												SW SDF RADAR INDICATES HOOK ECHO 30 MI SW 236/30 PK WND 20/35 29 742 19//	
S	1540	M32 ⊕	4	TRW+				24	28	GTS	953	TORNADO B 31 JUST NORTH OF FIELD MOVG E	RDC
RS	1555	~~E45 ⊕ 250 ⊕~~	7										
RS	1555	E45 ⊕ 250 ⊕	7	TRW-	926	73	64	27	32	G9	932	TORNADO B 31 E42 200 YDS NORTH OF ARPT MOVG E RB00 OCNL LTGICCG E PK WND 24/73 37 AB 30 E41 HAIL 1/2 IN LOWEST PRES 877 2132	RDC
RS	1614	E45 ⊕ 250 ⊕	7					21	18	G26	936	TE14 MOVD E RE14 PRESRR	RDC
R	1655	45 ⊕ E250 ⊕	10		940	73	62	21	17		936	TE14 RE14 MOVD E PK WND 21/26 13	RDC
R	1755	E45 ⊕ 250 ⊕	7		940	73	62	20	15		986	TCU ALQDS	RDC
		72423 62015	6	10	29	940		23	52	6	02	17503 6	97707 07207 22273 20006 47953
R	185	45 ⊕	7					944	76	61	18	09	937 TORNADO HAIL ⊕ RDC
R	1855	45 ⊕	7					944	70	61	18	09	937 OCNL LTGIC E RDC
R	1955	O	7					947	72	62	20	14	936 RDC
	2005	EARTHQUAKE FELT AT SOF											

http://noaa.imcwv.com/

WSSRD



HISTORY OF WEATHER OBSERVATIONS
LOUISVILLE, KENTUCKY
1851-2004

September 2004

Prepared By
Glen Conner
9216 Holland Road
Scottsville, Kentucky

This report was prepared for the Midwestern Regional Climate Center under the auspices of the Climate Database Modernization Program, NOAA's National Climatic Data Center, Asheville, North Carolina.

Louisville and Newport Barracks available for Kentucky

http://noaa.imcwv.com/

Joint Institute for the Study of the Atmosphere and Ocean

Extreme daily weather events during winter in the US and their frequency under major teleconnection patterns

COOP Midwest –Select from all regions–

Ratio maps for weather variables

TMAX
NAM PNA CTI

TMIN
NAM PNA CTI

PRCP
NAM PNA CTI

SNOW
NAM PNA CTI

Results for individual stations

Select a station by:
Map of region
State lists

Select just one type of result by:
Regional map

Data tables

Full listing

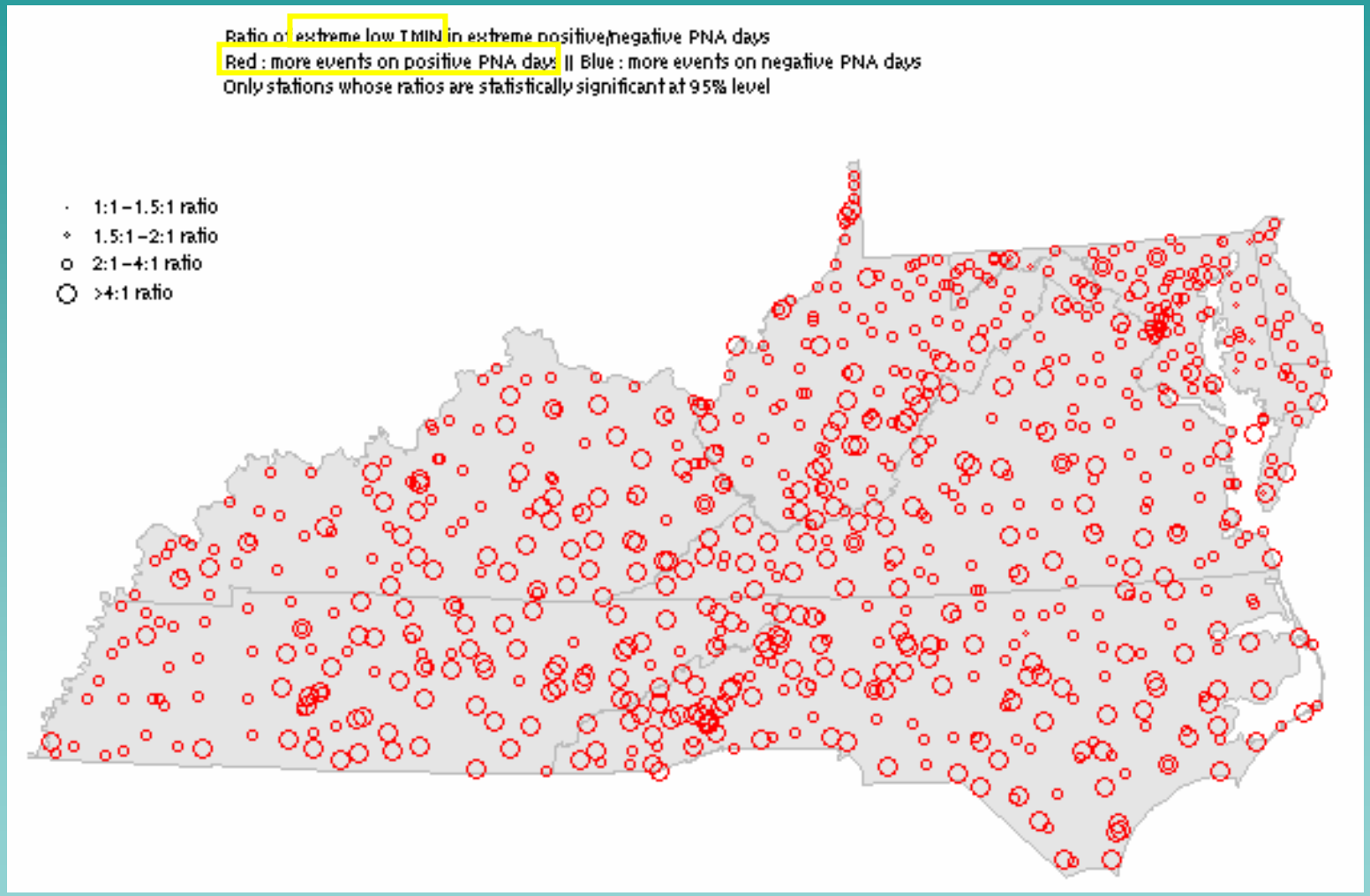
Reference information

Help index
Observed weather variables
TMAX | TMIN | PRCP | SNOW
The teleconnection patterns
NAM | PNA | CTI

Images courtesy NOAA Photo Library

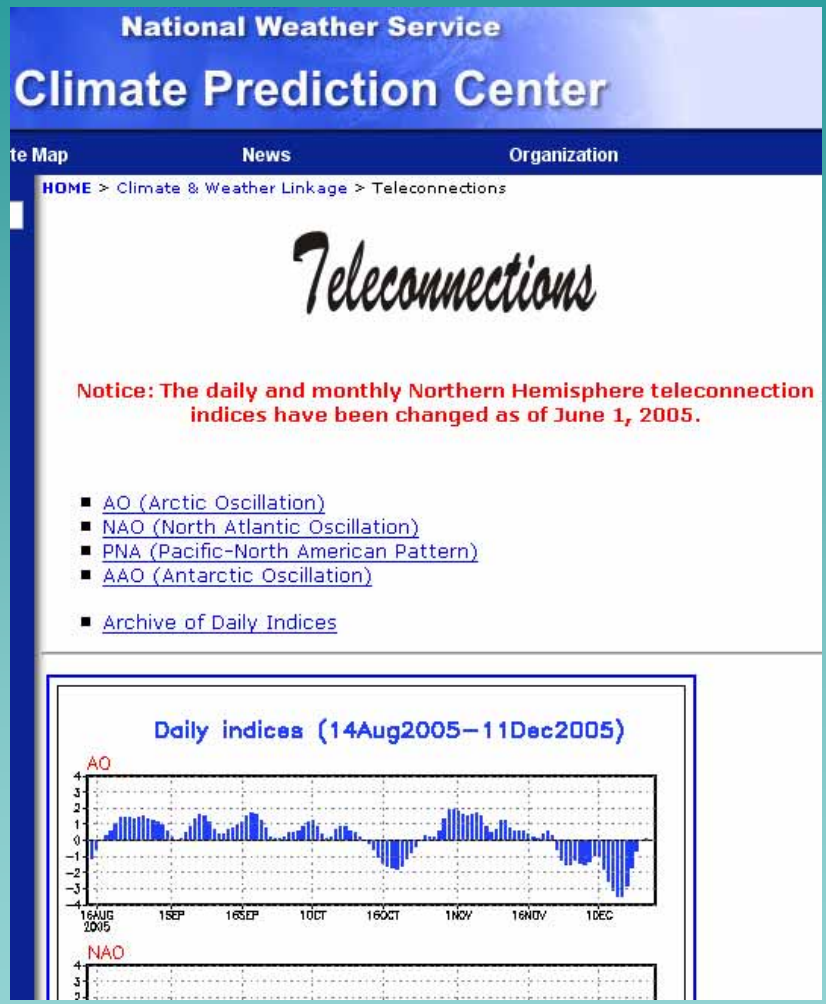
http://tao.atmos.washington.edu/greg/midwest/

Joint Institute for the Study of the Atmosphere and Ocean



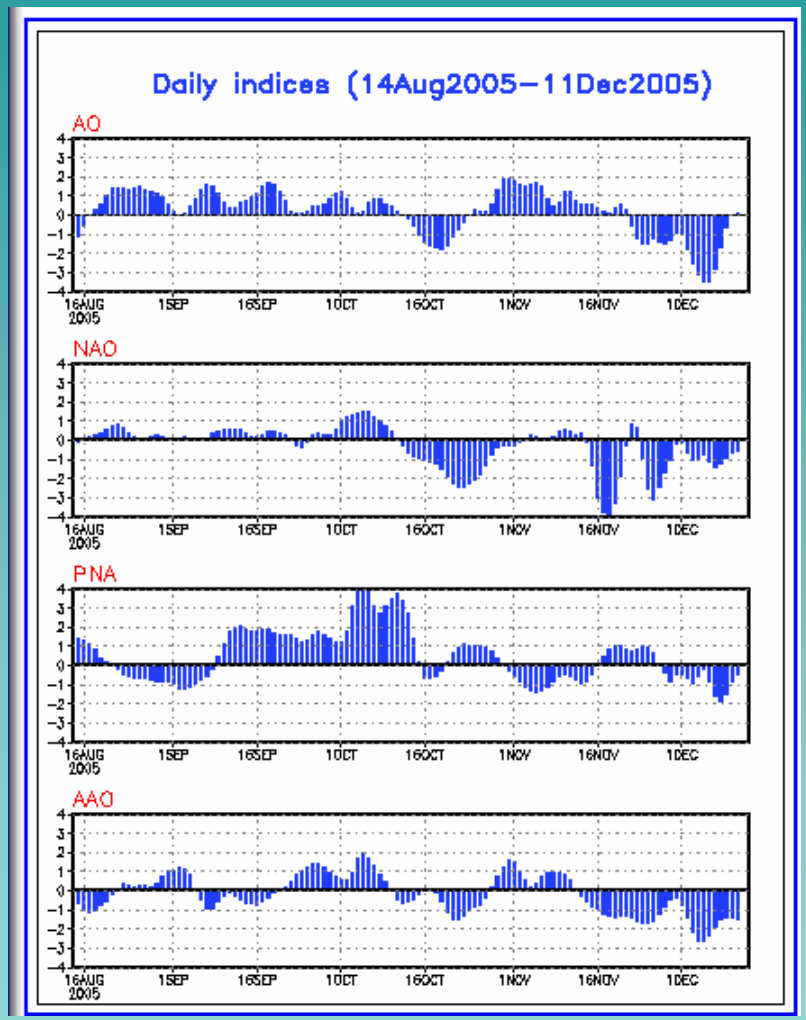
http://tao.atmos.washington.edu/greg/midwest/

Daily Teleconnection Indices



http://www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/teleconnections.shtml

Daily Teleconnection Indices

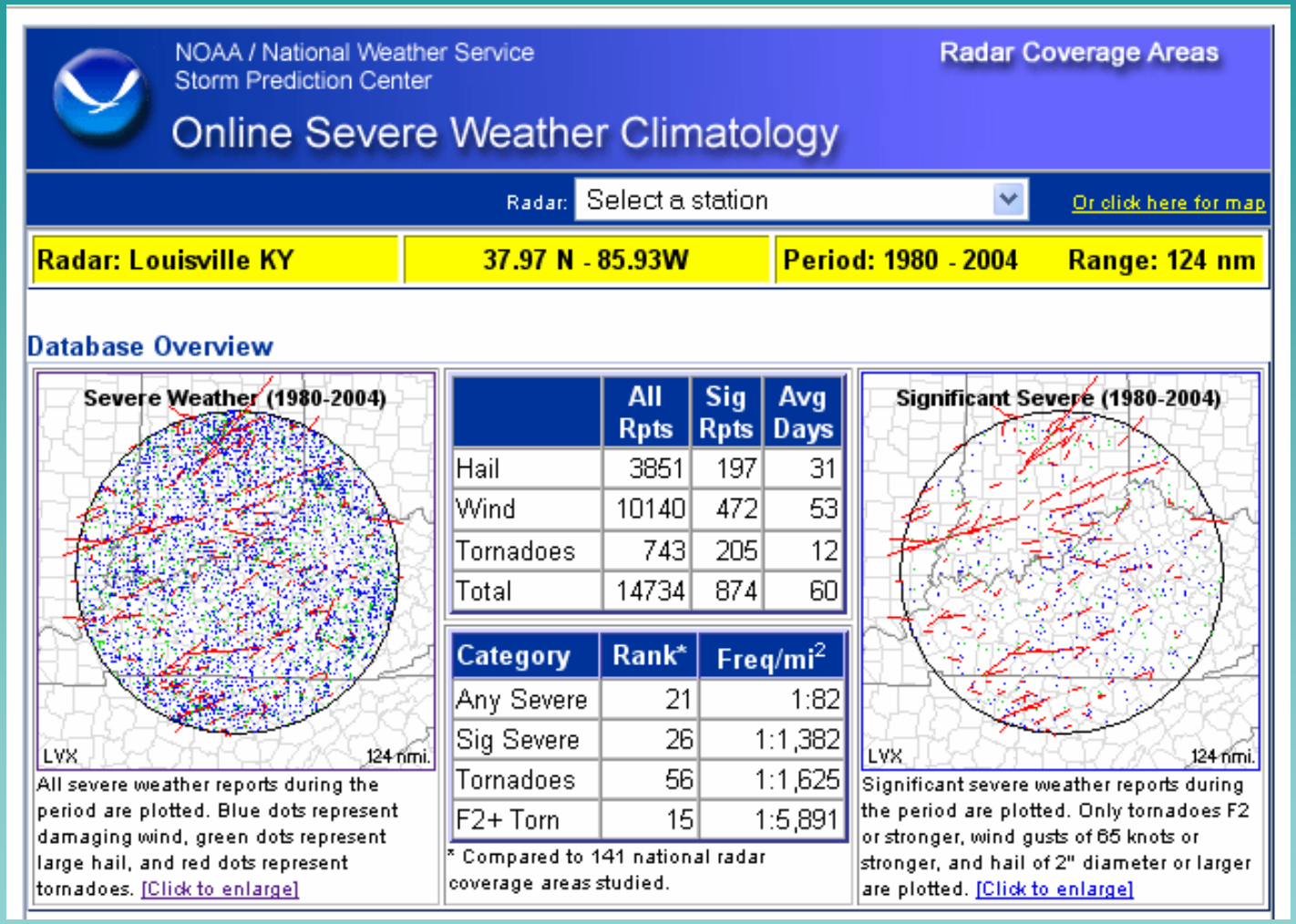


Date	AO	NAO	PNA	AAO
14Aug2005	-0.14784E+01	-0.12288E+00	0.15527E+01	-0.37312E+00
15Aug2005	-0.12516E+01	-0.23372E+00	0.12942E+01	-0.66861E+00
16Aug2005	-0.58519E+00	0.53139E-01	0.13071E+01	-0.98713E+00
17Aug2005	0.19832E+00	0.32646E+00	0.13229E+01	-0.13680E+01
18Aug2005	0.31764E+00	0.22646E+00	0.84820E+00	-0.10504E+01
19Aug2005	0.35610E+00	0.33681E+00	0.28188E+00	-0.72558E+00
20Aug2005	0.11730E+01	0.64160E+00	0.14223E+00	-0.43683E+00
21Aug2005	0.14756E+01	0.82589E+00	0.43438E-01	-0.38190E+00
22Aug2005	0.15483E+01	0.92152E+00	-0.11717E+00	-0.28382E+00
23Aug2005	0.13625E+01	0.74040E+00	-0.45030E+00	0.51822E+00
24Aug2005	0.12587E+01	0.32936E+00	-0.74428E+00	0.32759E+00
25Aug2005	0.14462E+01	0.12092E+00	-0.59438E+00	-0.78961E-01
26Aug2005	0.15630E+01	0.54421E-01	-0.63561E+00	0.[illegible]E+00
27Aug2005	0.14166E+01	0.25557E-01	-0.77[illegible]	[illegible]E+00
28Aug2005	0.10483E+01	0.20481E+00	-0.[illegible]	2426E-01
29Aug2005	0.11025E+01	0.43315E+00	-0.[illegible]	0.13556E+00
30Aug2005	0.11660E+01	0.2818[illegible]	-0.[illegible]	0.11128E+01
31Aug2005	0.58705E+00	-0.14778E+00	-0.[illegible]+00	0.10440E+01
01Sep2005	0.87521E-01	-0.[illegible]	[illegible]3E+00	0.90660E+00
02Sep2005	-0.56181E-01	-0.[illegible]	0.12659E+01	0.12647E+01
03Sep2005	-0.88489E-01	-0.[illegible]	0.14013E+01	0.15296E+01
04Sep2005	0.34823E+00	0.21[illegible]	-0.11281E+01	0.74086E+00
05Sep2005	0.10379E+01	0.[illegible]E-01	-0.79682E+00	0.31839E+00
06Sep2005	0.[illegible]	[illegible]40E+00	-0.82998E+00	-0.62506E+00
07Sep2005	0.[illegible]	16834E+00	-0.71871E+00	-0.10205E+01
08Sep2005	0.[illegible]	0.43177E+00	-0.21877E+00	-0.11485E+01
09Sep2005	0.[illegible]	0.61617E+00	0.45639E+00	-0.65260E+00
10Sep2005	0.[illegible]+00	0.46778E+00	0.11770E+01	0.61888E-01
11Sep2005	0.[illegible]81E+00	0.60696E+00	0.18191E+01	-0.28257E+00
12Sep2005	0.[illegible]39417E+00	0.62618E+00	0.22536E+01	-0.14911E+00
13Sep2005	0.66490E+00	0.48429E+00	0.19582E+01	-0.51217E+00
14Sep2005	0.95319E+00	0.51047E+00	0.18842E+01	-0.67483E+00
15Sep2005	0.68649E+00	0.15244E+00	0.17909E+01	-0.72665E+00
16Sep2005	0.10802E+01	0.22196E-02	0.17623E+01	-0.61708E+00
17Sep2005	0.15429E+01	0.29751E+00	0.19168E+01	-0.78135E+00
18Sep2005	0.18299E+01	0.60378E+00	0.19977E+01	-0.34883E+00
19Sep2005	0.16530E+01	0.57981E+00	0.16765E+01	-0.95831E-01
20Sep2005	0.13514E+01	0.34983E+00	0.14876E+01	0.71003E-01
21Sep2005	0.68053E+00	0.35236E+00	0.15908E+01	0.97962E-01
22Sep2005	0.10567E+00	0.70643E-01	0.16618E+01	0.51445E+00

Monthly data to 1950, tabular and graphical, and daily data to 1950 tabular

http://www.cpc.ncep.noaa.gov/products/precip/CWlink/pna/daily.index.ascii

Radar-Oriented Severe Weather Climatology



NOAA / National Weather Service
Storm Prediction Center

Online Severe Weather Climatology

Radar Coverage Areas

Radar: Select a station — Or click here for map

Radar: Louisville KY | **37.97 N - 85.93W** | **Period: 1980 - 2004** | **Range: 124 nm**

Database Overview

Severe Weather (1980-2004)

LVX 124 nmi.

All severe weather reports during the period are plotted. Blue dots represent damaging wind, green dots represent large hail, and red dots represent tornadoes. [Click to enlarge]

	All Rpts	Sig Rpts	Avg Days
Hail	3851	197	31
Wind	10140	472	53
Tornadoes	743	205	12
Total	14734	874	60

Category	Rank*	Freq/mi^2
Any Severe	21	1:82
Sig Severe	26	1:1,382
Tornadoes	56	1:1,625
F2+ Torn	15	1:5,891

* Compared to 141 national radar coverage areas studied.

Significant Severe (1980-2004)

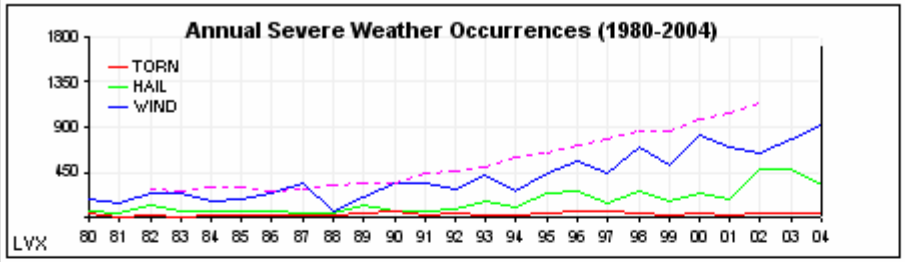
LVX 124 nmi.

Significant severe weather reports during the period are plotted. Only tornadoes F2 or stronger, wind gusts of 65 knots or stronger, and hail of 2" diameter or larger are plotted. [Click to enlarge]

http://www.spc.noaa.gov/climo/online/rda/LVX.html

Radar-Oriented Severe Weather Climatology

Annual Report Information

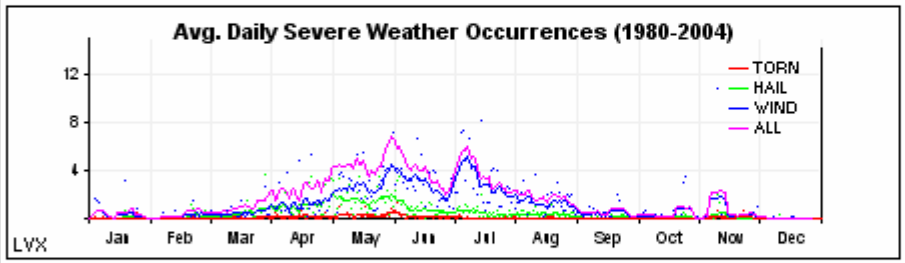


Plot of annual severe weather reports in the search area. The dashed magenta line denotes a 5 year running average of all reports.

20 year report increase: 431%
10 year report increase: 226%
5 year report increase: 80%

See annual table below

Daily Report Information



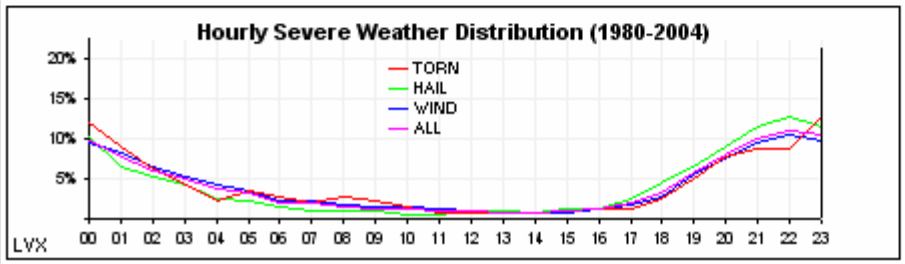
Plot of daily severe weather reports in the search area. Lines denote a 7 day running mean.

Maximum daily value:
6.8 on 30 May

Primary Season:
Mar 29 - Aug 26

See monthly table below

Hourly Report Information



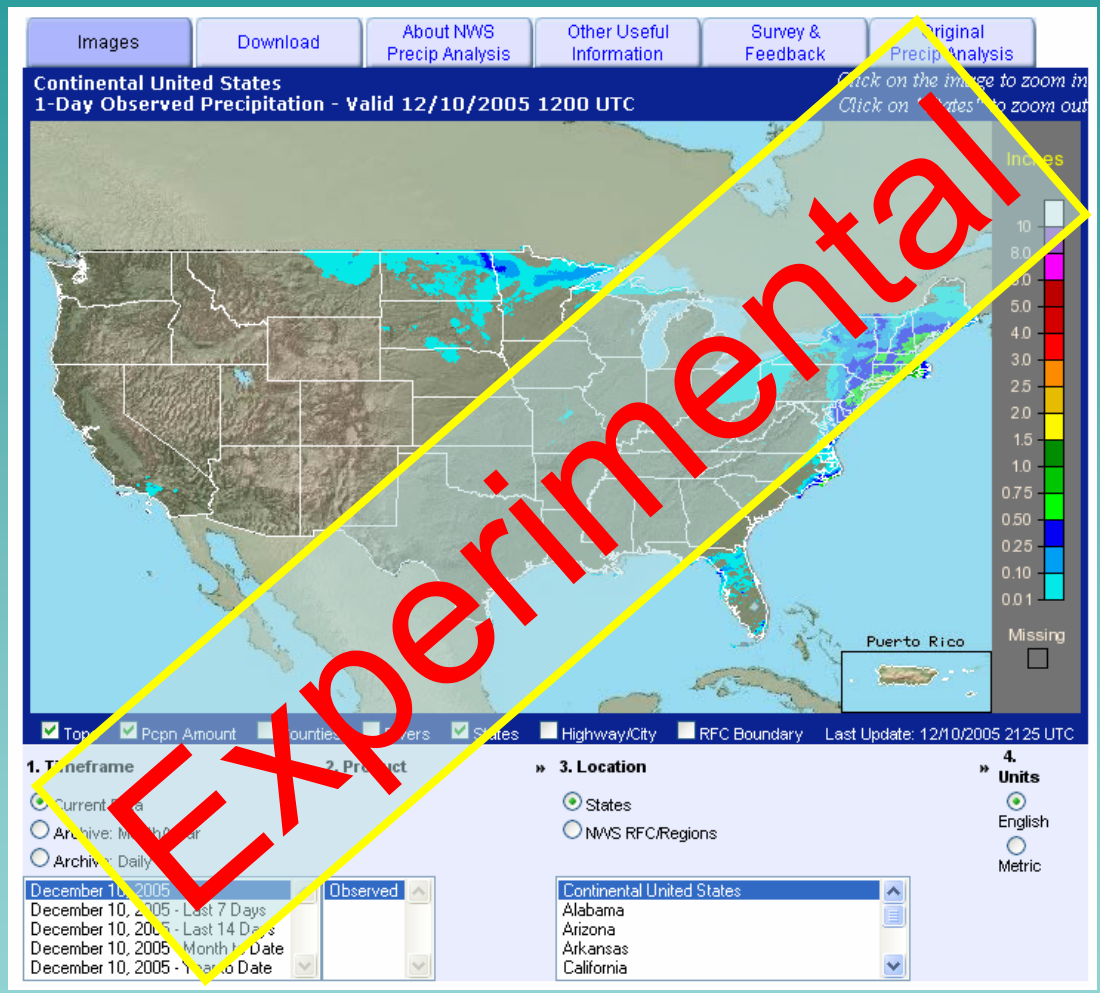
Plot of hourly severe weather reports in the search area. Values are in percent of total, and have been rounded to the nearest hour (UTC).

Maximum hourly value:
11% at 22 UTC

See hourly table below

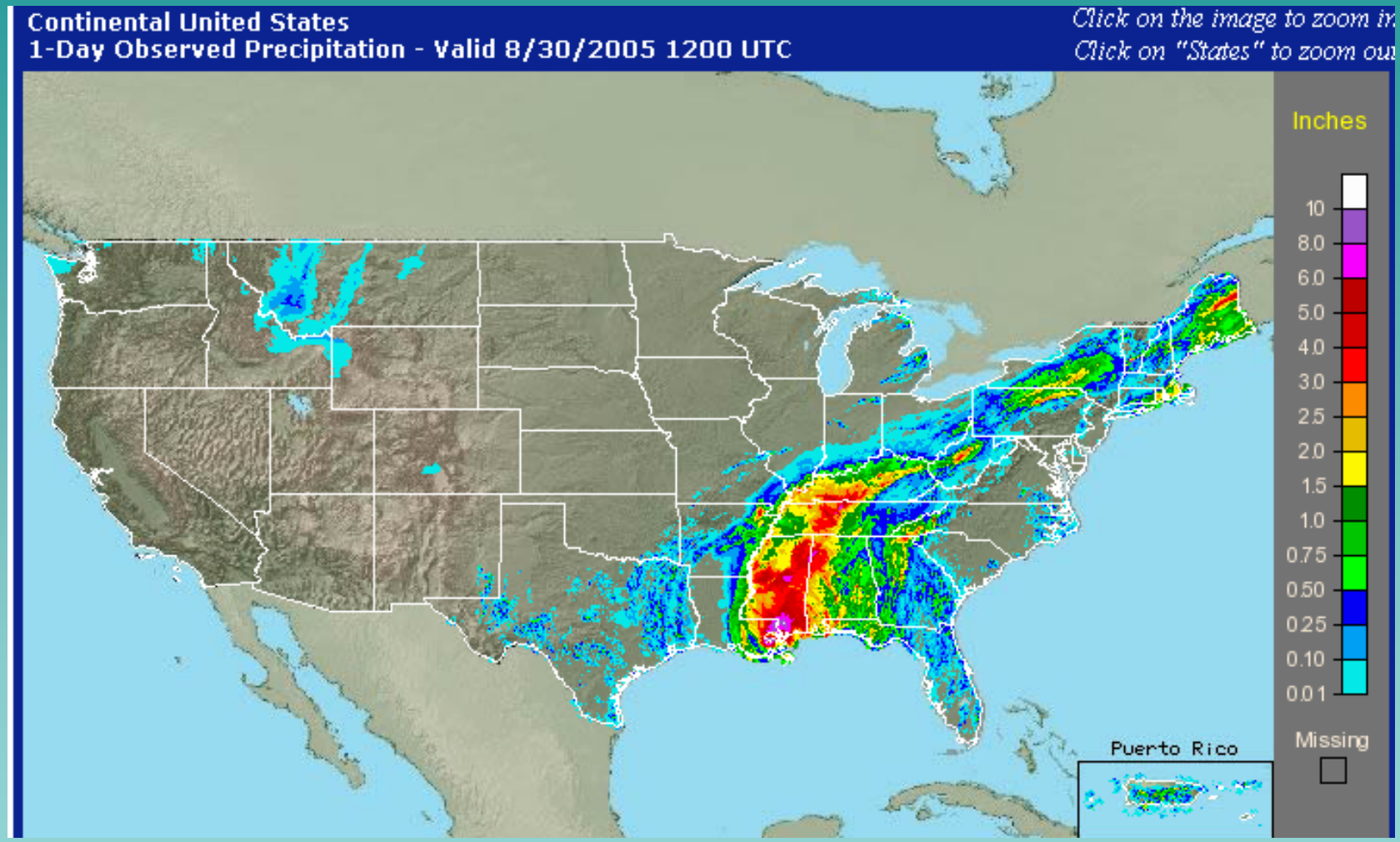
http://www.spc.noaa.gov/climo/online/rda/LVX.html

Precipitation Analysis



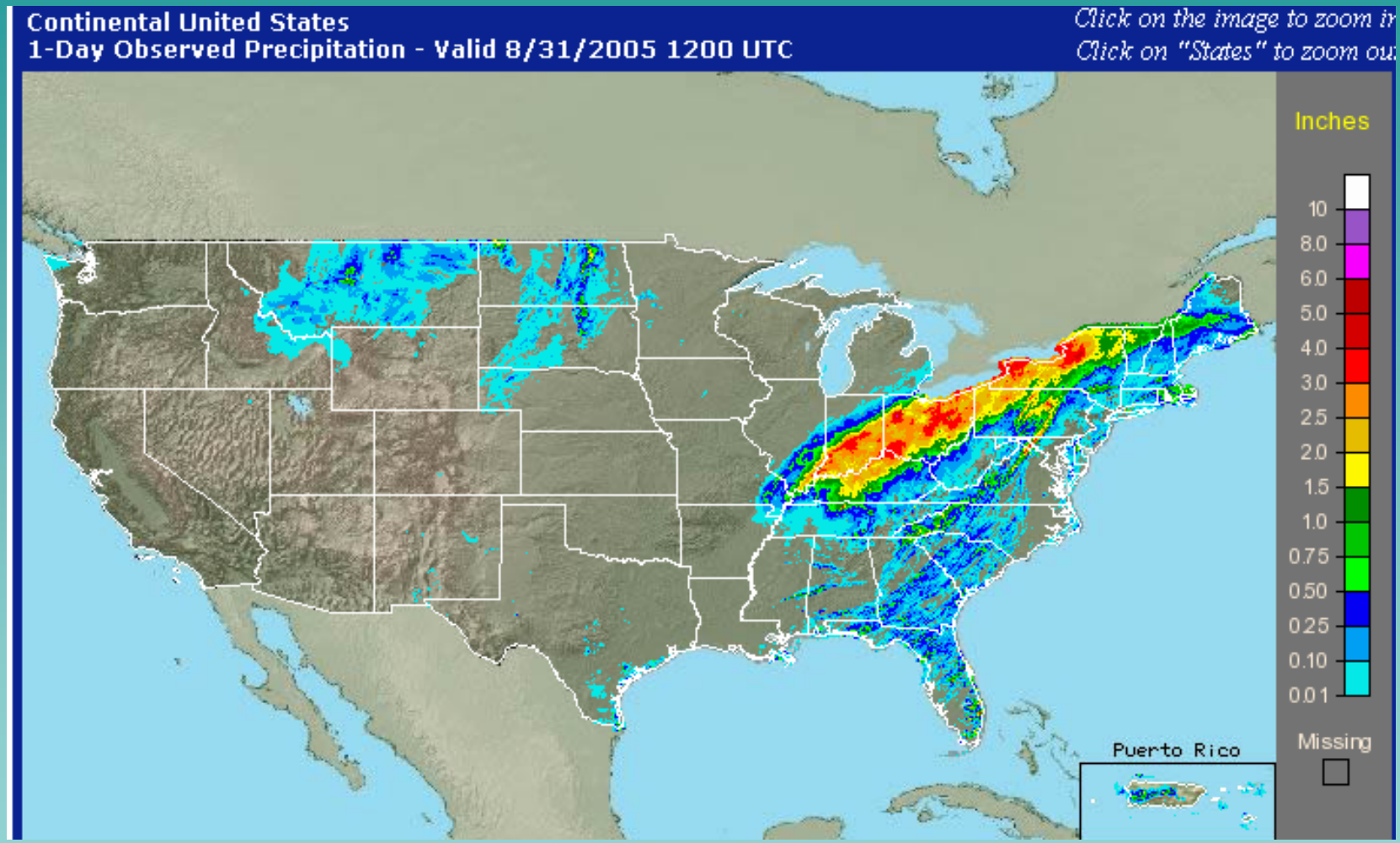
http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php

Precipitation Analysis



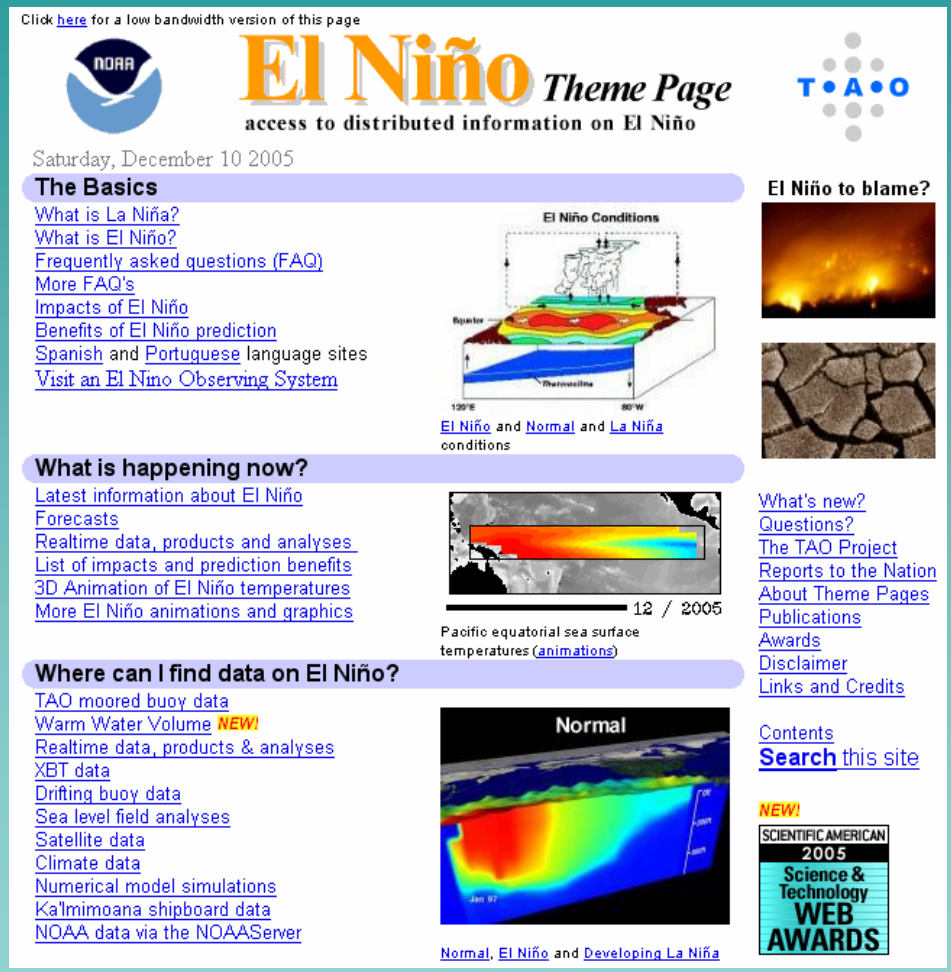
http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php

Precipitation Analysis



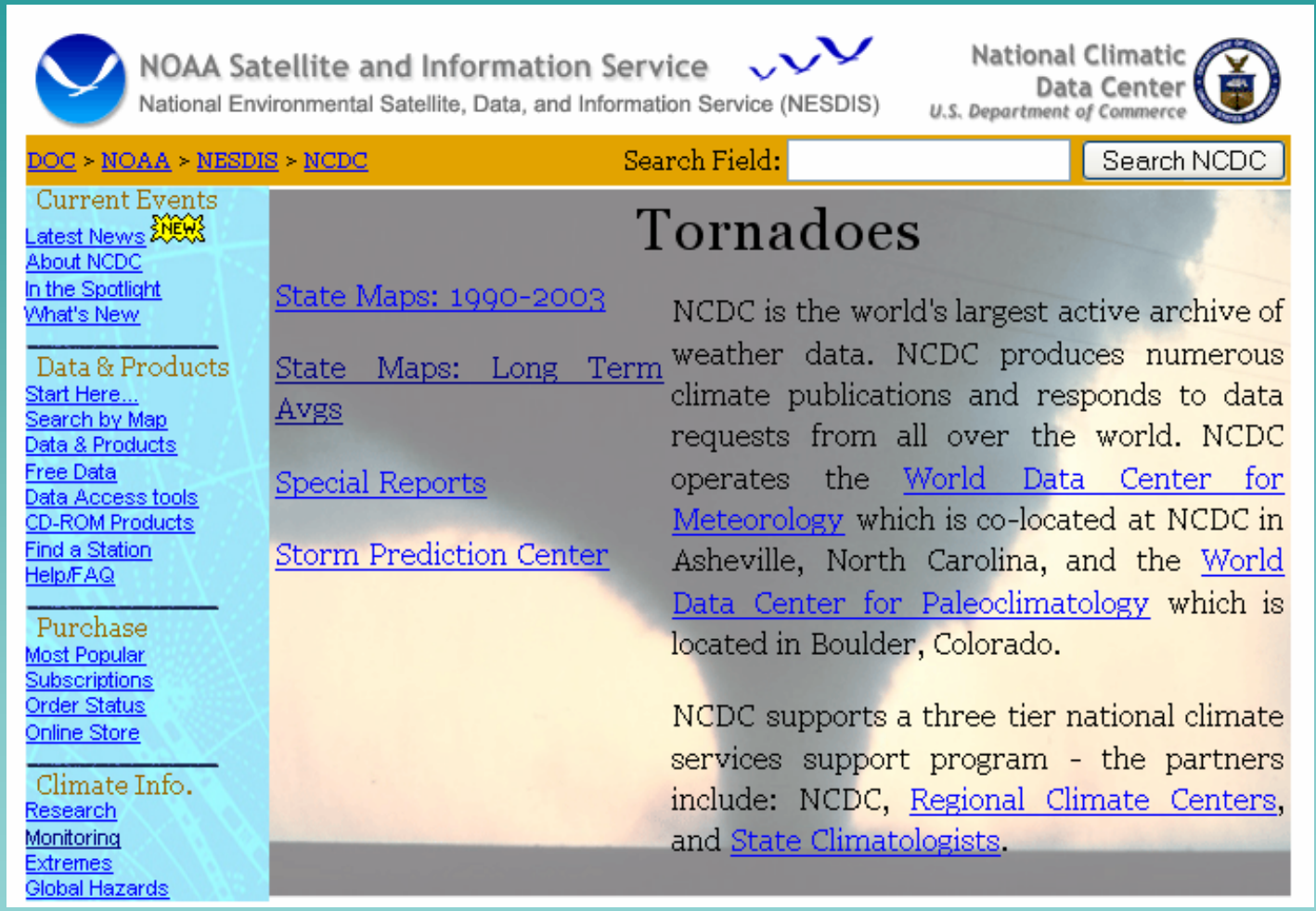
http://www.srh.noaa.gov/rfcshare/precip_analysis_new.php

El Nino Theme Page



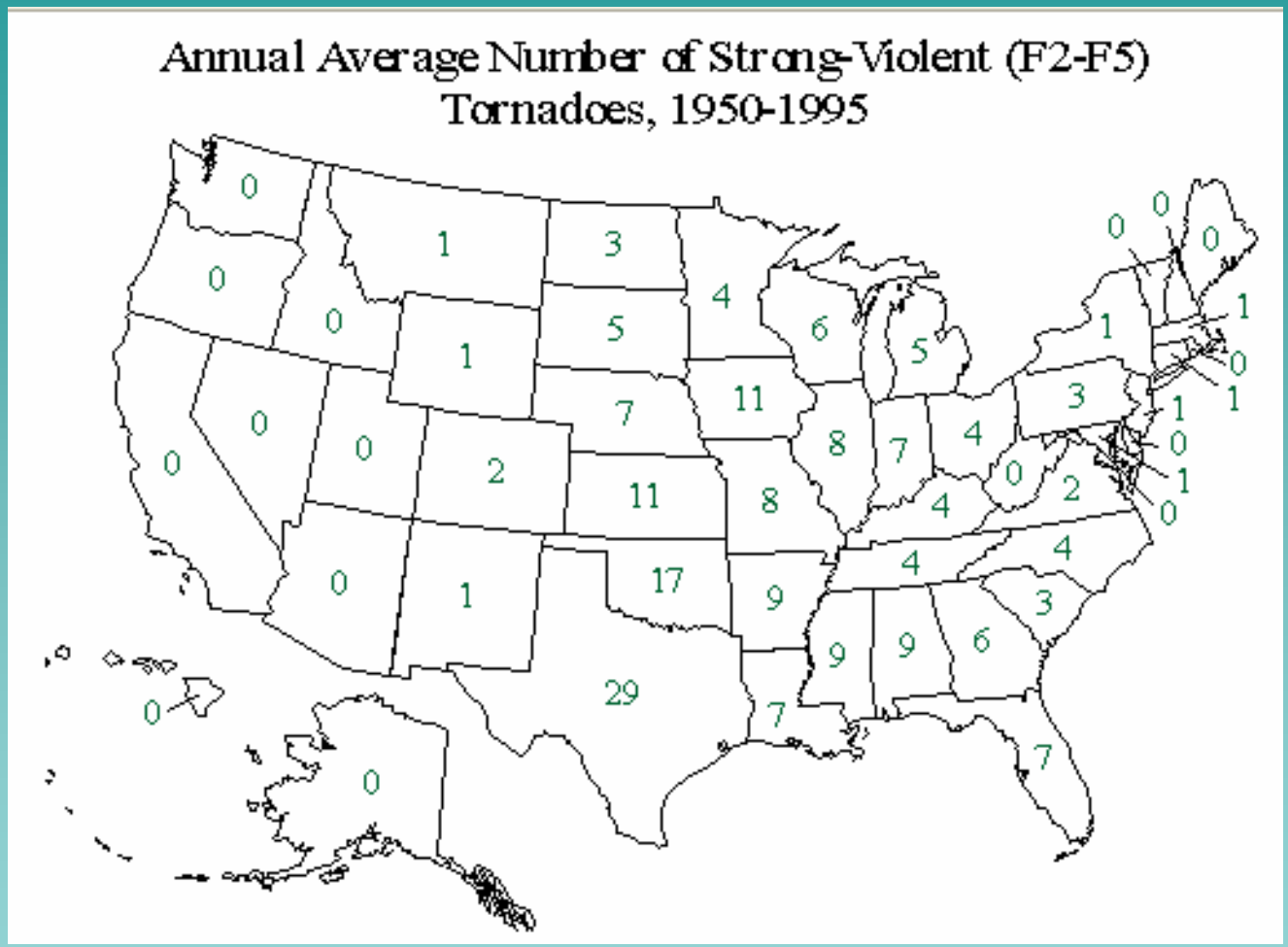
http://www.pmel.noaa.gov/tao/elnino/nino-home.html

NCDC Tornado Climatology



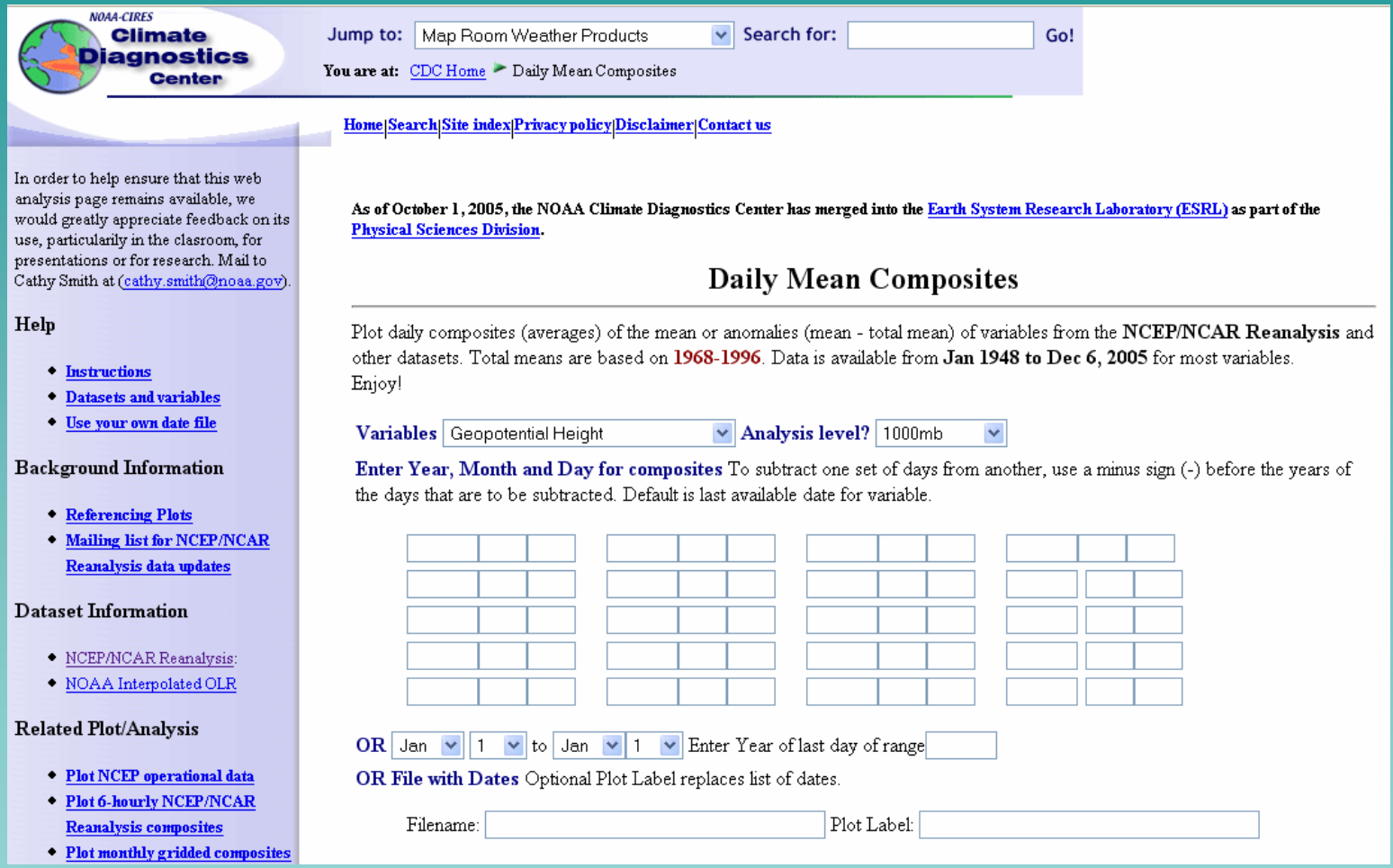
http://www.ncdc.noaa.gov/oa/climate/severeweather/tornadoes.html

NCDC Tornado Climatology



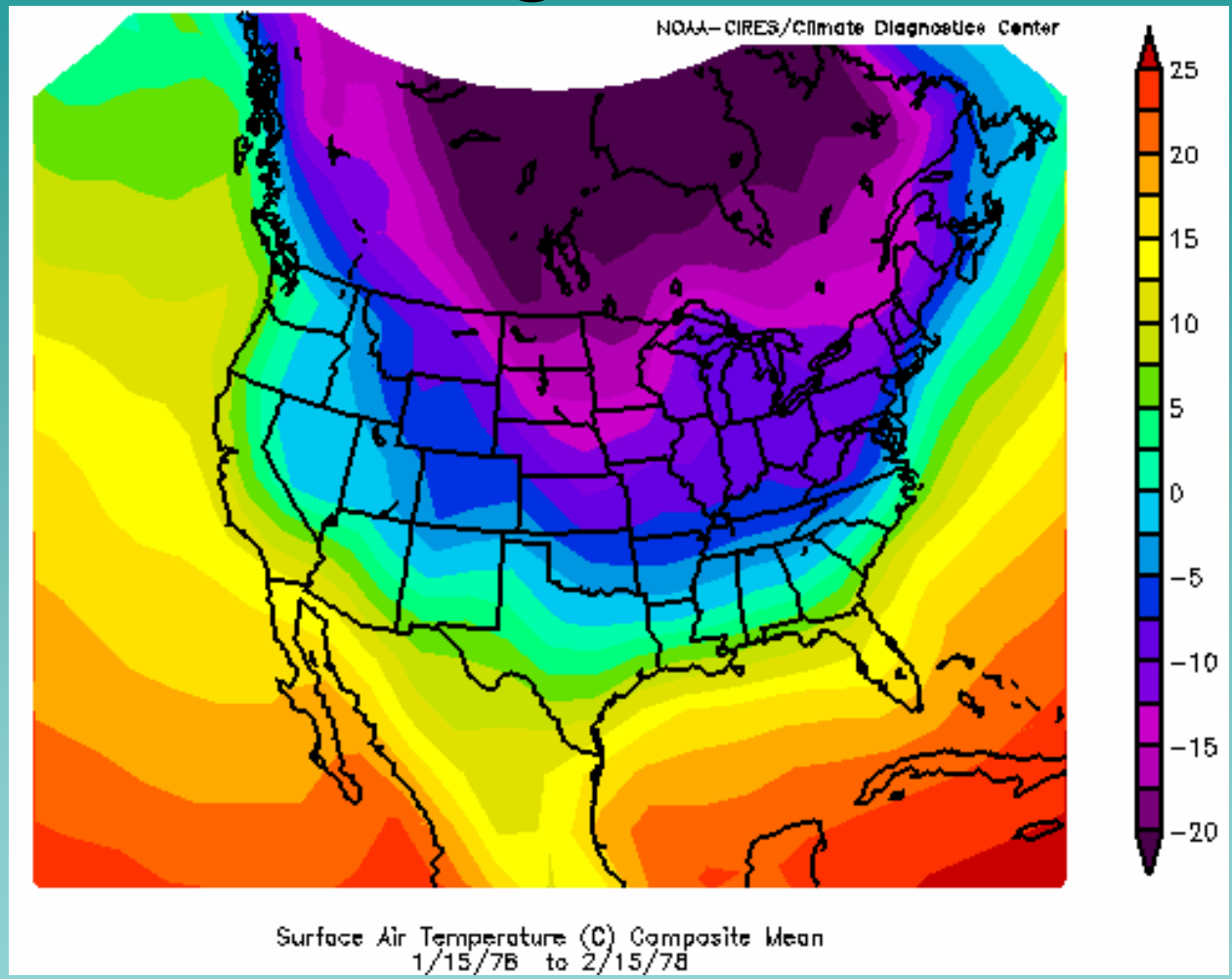
http://www.ncdc.noaa.gov/oa/climate/severeweather/tornadoes.html

Climate Diagnostics Center



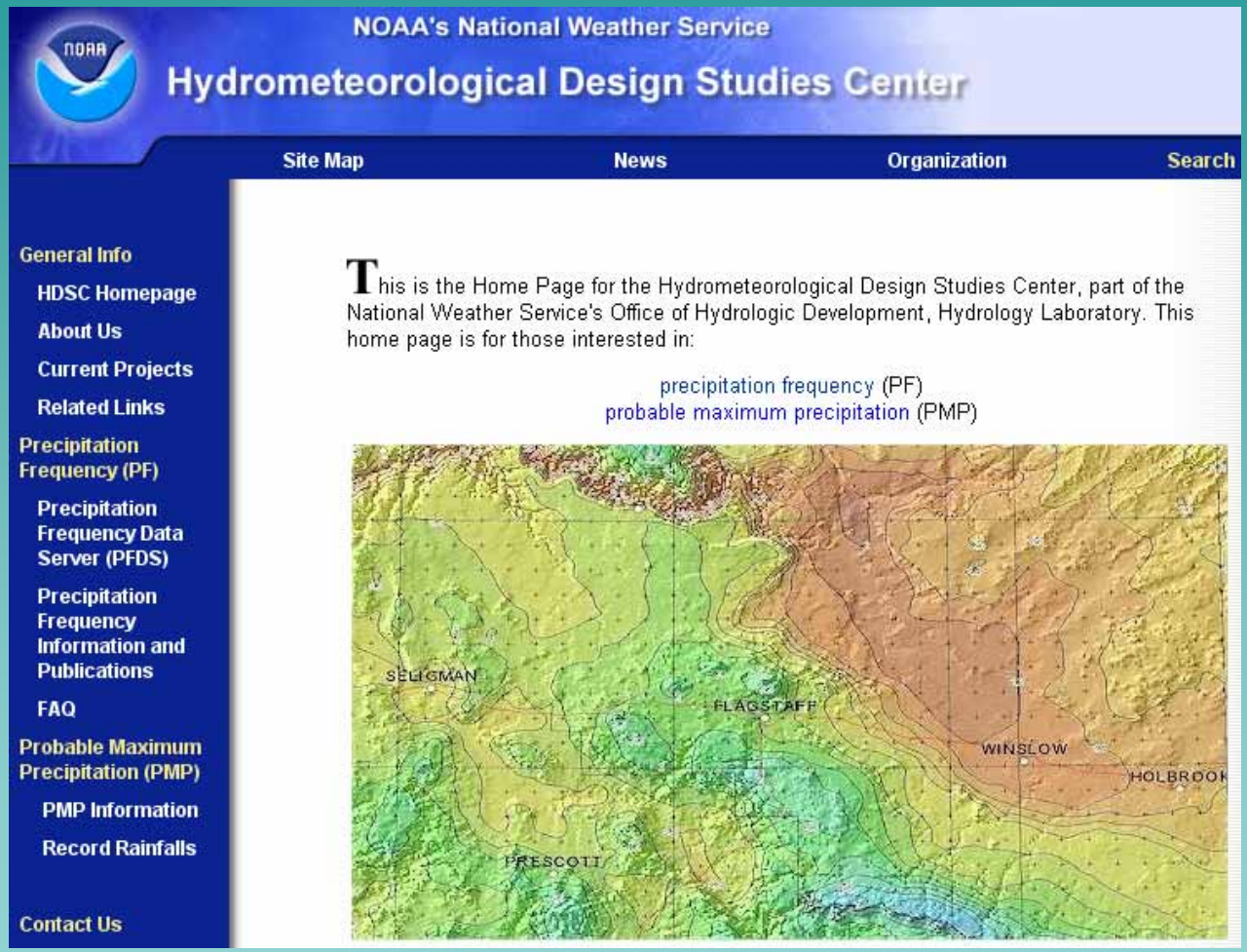
http://www.cdc.noaa.gov/Composites/Day/

Climate Diagnostics Center



http://www.cdc.noaa.gov/Composites/Day/

Precipitation Frequency



http://www.nws.noaa.gov/ohd/hdsc/

Precipitation Frequency

Precipitation Frequency Estimates (inches)

AEP* (1-in-Y)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
2	0.41	0.64	0.78	1.05	1.29	1.51	1.61	1.95	2.30	2.75	3.25	3.68	4.37	4.94	6.74	8.41	10.61	12.68
5	0.52	0.80	0.99	1.36	1.71	1.99	2.13	2.57	3.02	3.61	4.28	4.77	5.63	6.35	8.51	10.45	12.96	15.37
10	0.59	0.91	1.12	1.56	1.99	2.33	2.50	3.02	3.54	4.24	5.01	5.54	6.54	7.35	9.70	11.78	14.41	17.00
25	0.67	1.03	1.28	1.82	2.36	2.79	3.00	3.63	4.22	5.09	6.00	6.56	7.76	8.69	11.22	13.43	16.11	18.89
50	0.74	1.13	1.40	2.00	2.65	3.14	3.40	4.11	4.77	5.78	6.77	7.35	8.74	9.74	12.37	14.63	17.29	20.19
100	0.80	1.22	1.51	2.20	2.94	3.51	3.82	4.63	5.34	6.49	7.58	8.17	9.77	10.85	13.52	15.81	18.38	21.39
200	0.87	1.31	1.62	2.39	3.25	3.90	4.27	5.17	5.95	7.27	8.43	9.03	10.85	12.01	14.68	16.97	19.42	22.51
500	0.96	1.42	1.77	2.64	3.67	4.44	4.91	5.95	6.81	8.37	9.60	10.22	12.39	13.65	16.24	18.48	20.67	23.86
1000	1.03	1.51	1.88	2.84	4.01	4.88	5.42	6.59	7.51	9.28	10.55	11.17	13.64	14.96	17.44	19.61	21.57	24.80

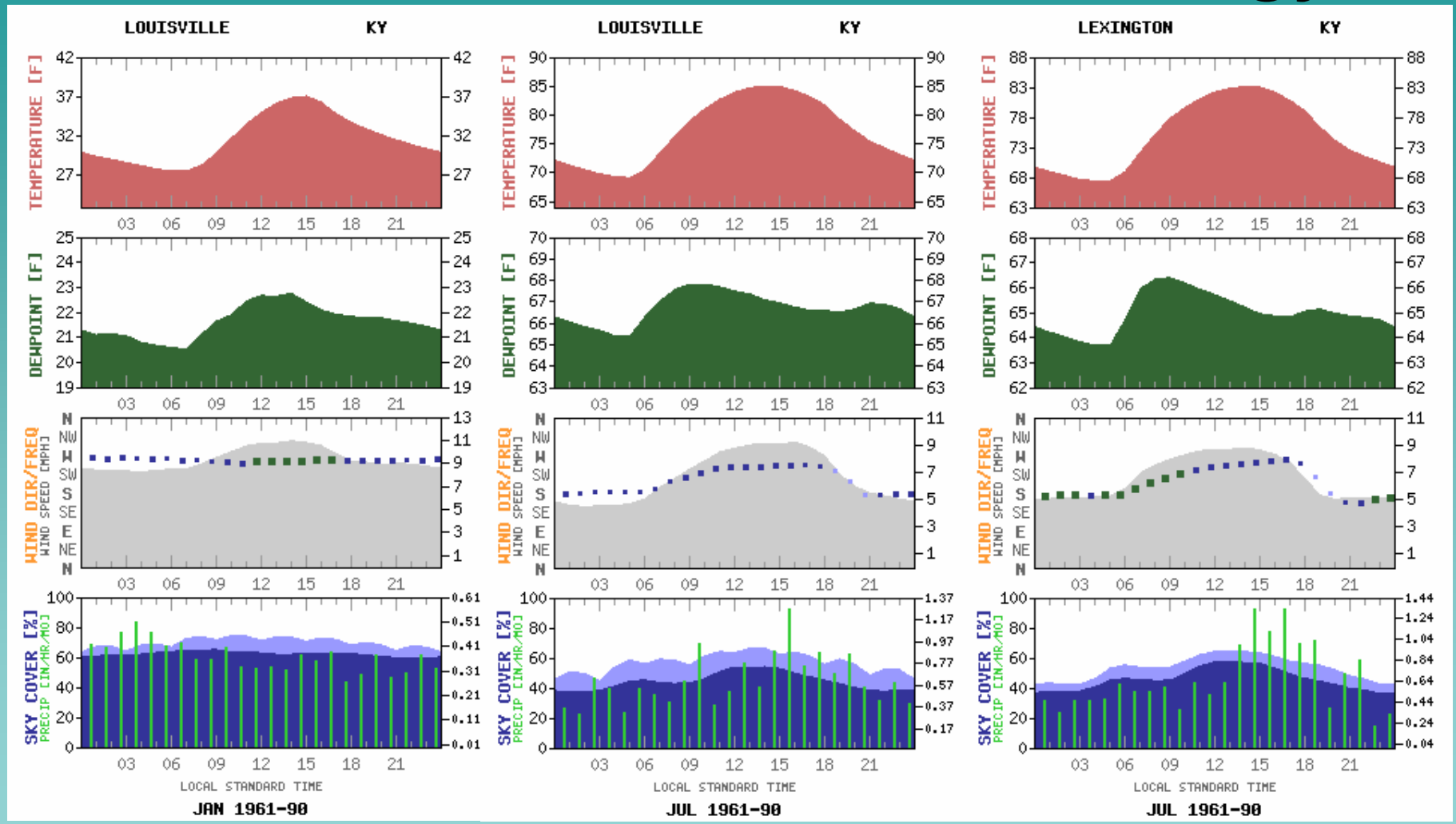
2.94” of rain falling at Paris, Kentucky in one hour would be a once-in-100-years event

http://www.nws.noaa.gov/ohd/hdsc/

National Diurnal Climatology

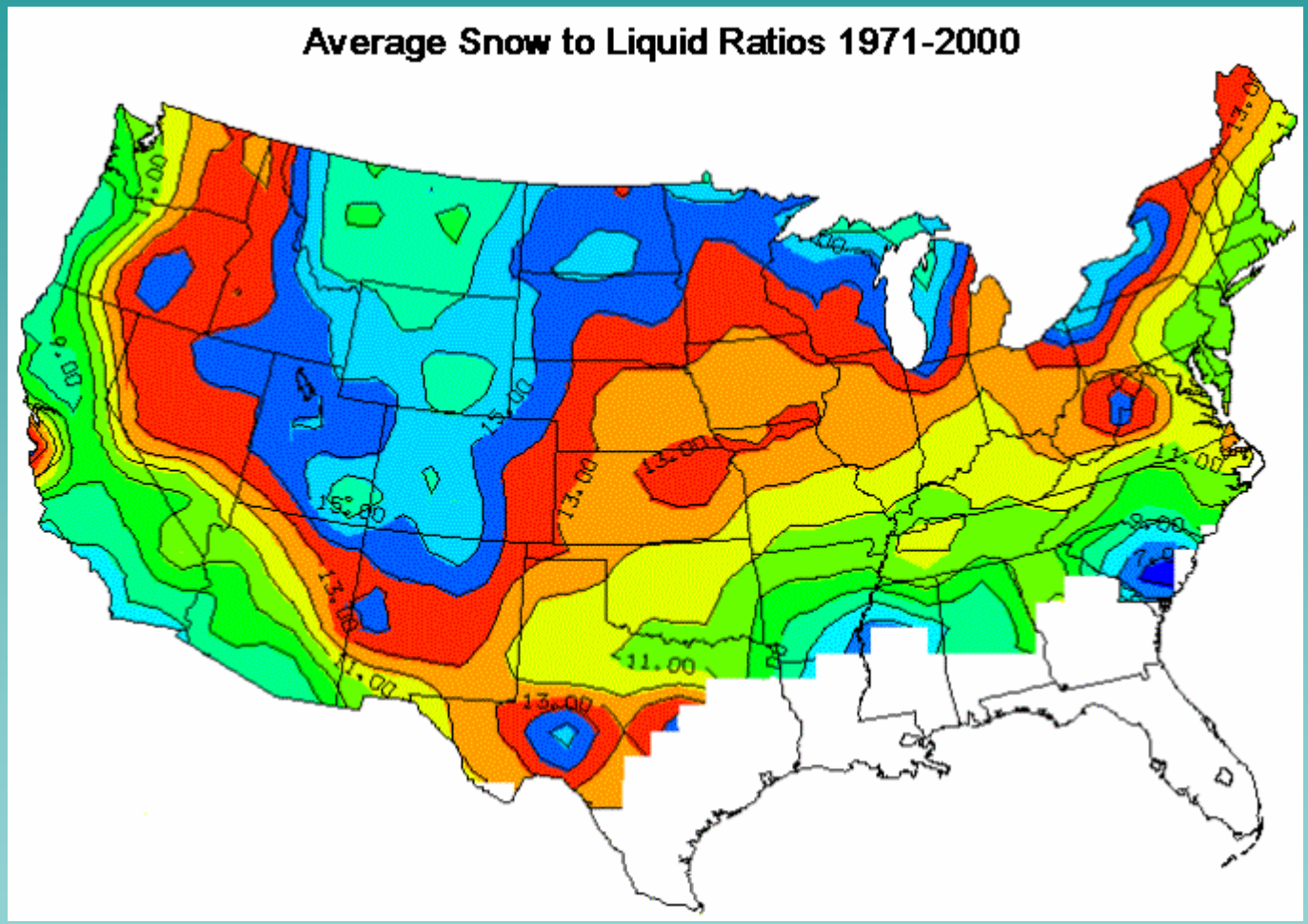
http://www.microclimates.org/diurnal/index.html

National Diurnal Climatology



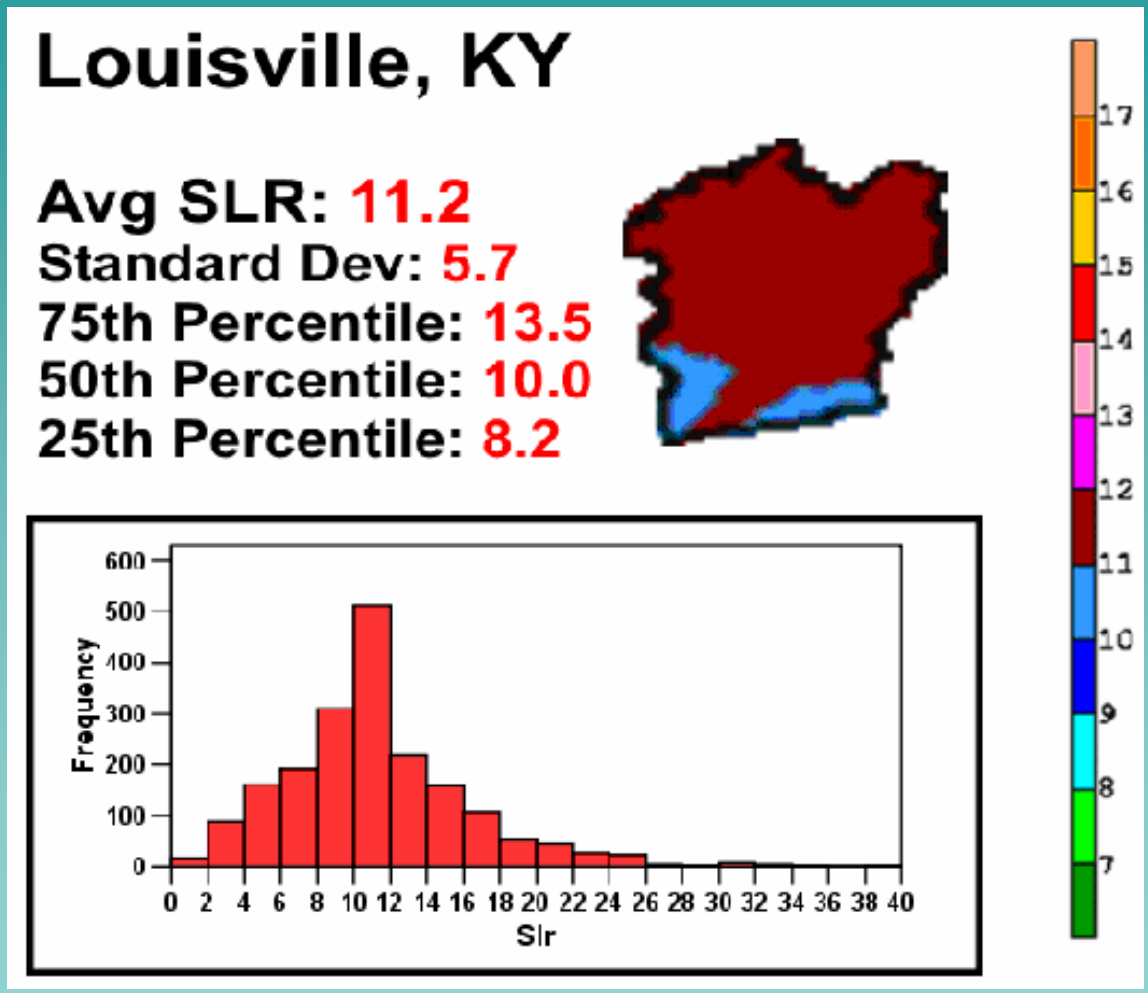
http://www.microclimates.org/diurnal/index.html

Snow-to-Liquid Ratios



http://www.eas.slu.edu/CIPS/Research/snowliquidrat.html

Snow-to-Liquid Ratios



http://www.eas.slu.edu/CIPS/Research/snowliquidrat.html

Tiempo Climate Newswatch

Tiempo

Tiempo Climate Newswatch

Week ending December 11th 2005

A weekly magazine covering climate and development

The Cyberlibrary

Newswatch

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Interview

Current climate

The Final Word

The rules for limiting greenhouse gas emissions under the Kyoto Protocol have been adopted. The agreement took place at the First Meeting of the Parties to the Kyoto Protocol, which began on November 28th 2005, alongside the 11th Conference of the Parties to the United Nations Framework Convention on Climate Change. The meetings are being held in Montreal, Canada. The Kyoto rules cover greenhouse gas accounting, investment in developing countries, emissions trading and other operational details.

Saudi Arabia blocked agreement on the provision on compliance, arguing that a proposed amendment would strengthen the rules. Others considered the move an attempt to delay agreement on the deal and postpone the discussions on what do after the end of the Kyoto period in 2012. "They're trying to stop any discussion of what to do after 2012," accused Jennifer Morgan of WWF International. There was confidence, though, that agreement would be reached by the end of the meeting. The compliance system stipulates that any country that misses its target will have to make up the shortfall, and an additional 30 per cent penalty, during the next period. Emissions trading rights may be affected.

More information

- ENS
- Reuters
- Stuff
- New Zealand Herald
- Planet Ark
- Webcast
- Earth Negotiations Bulletin, daily reports
- On the Web: The climate negotiations

The Atlantic hurricane season of 2005 drew to an official close on Wednesday November 30th, though activity continued with the formation of Tropical Storm Epsilon following Tropical Storm Delta's eastward progress towards Morocco. The season as a whole broke a number of records. Twenty-six tropical storms formed, compared to the previous high of 21 back in 1933. Thirteen developed into hurricanes, beating the old record of 12 in 1969. Four major hurricanes made landfall in the United States, a new record. A record five storms formed in July. Hurricane Dennis was the most powerful July storm recorded. Three hurricanes reached Category Five status, another record. Hurricane Vince became the first known tropical storm to hit Spain and Portugal. Hurricane Wilma was the most powerful hurricane known to have formed in the Atlantic Basin.

Hurricane Katrina proved the most costly natural disaster to hit the United States, with damage estimated at US$80 billion and an estimated 1300 fatalities. "Within all the record-breaking statistics of the season, there are epic human impacts... suffering on a very large scale," commented Max Mayfield, director of the United States National Hurricane Center (NHC). Forecasters had warned that activity would be high during 2005 because of high ocean temperatures in the tropical Atlantic. High-level wind conditions also played a part. Many storms formed closer to land and developed more rapidly than usual due to the extra energy picked up from the warm water. According to NHC forecaster Stacy Stewart, "Wilma went from a tropical storm to Category Five in 24 hours. That's unprecedented!"

More information

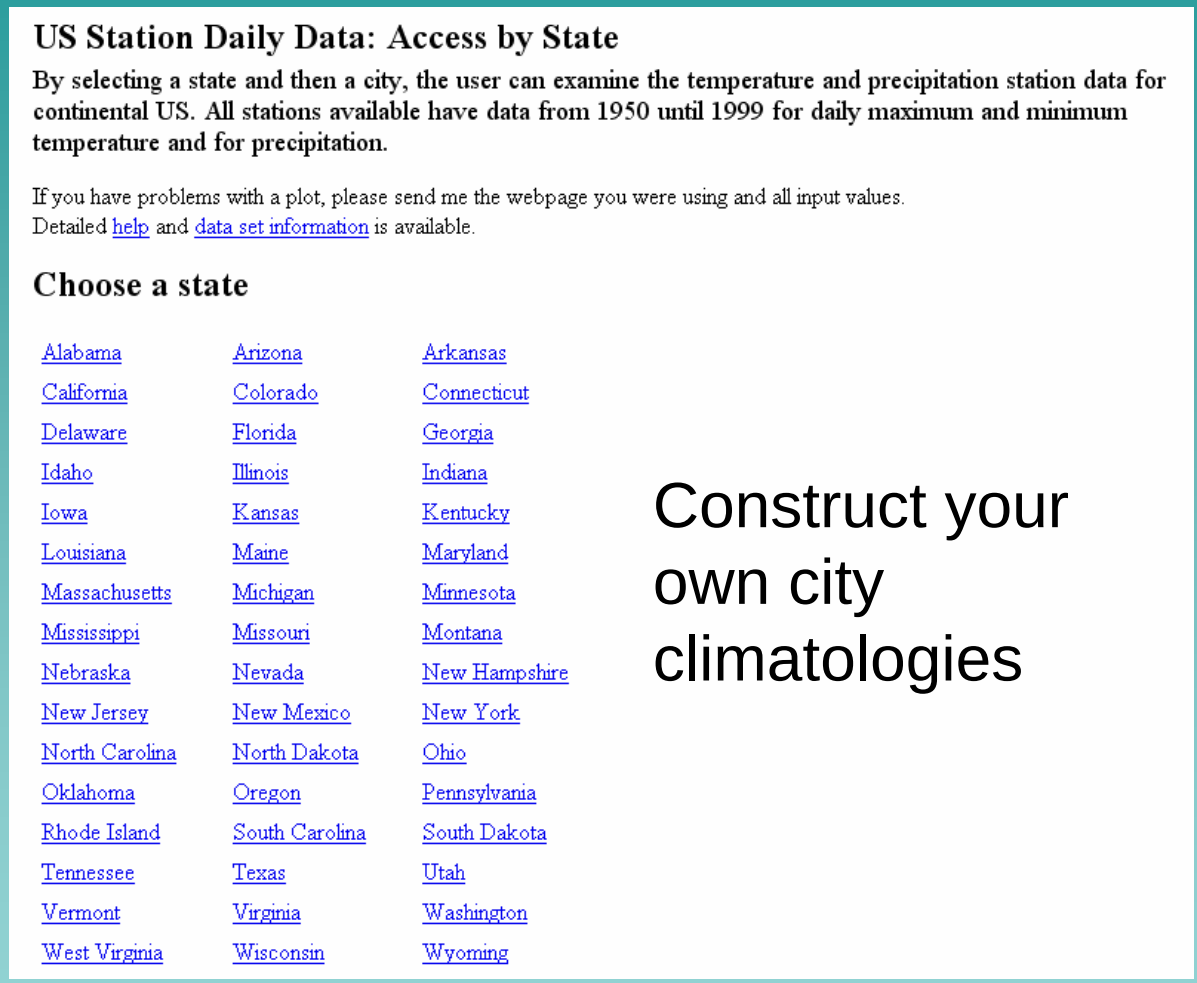
Bright Ideas

Bluesky International has developed an aerial thermal imaging system that allows local government departments to identify energy loss "hotspots" in residential properties and target energy saving assistance

German cities are recycling prefabricated concrete panels used in slab construction of dwellings when redeveloping housing estates

http://www.tiempocyberclimate.org/newswatch/

CDC U.S. Climatologies



US Station Daily Data: Access by State

By selecting a state and then a city, the user can examine the temperature and precipitation station data for continental US. All stations available have data from 1950 until 1999 for daily maximum and minimum temperature and for precipitation.

If you have problems with a plot, please send me the webpage you were using and all input values.
Detailed help and data set information is available.

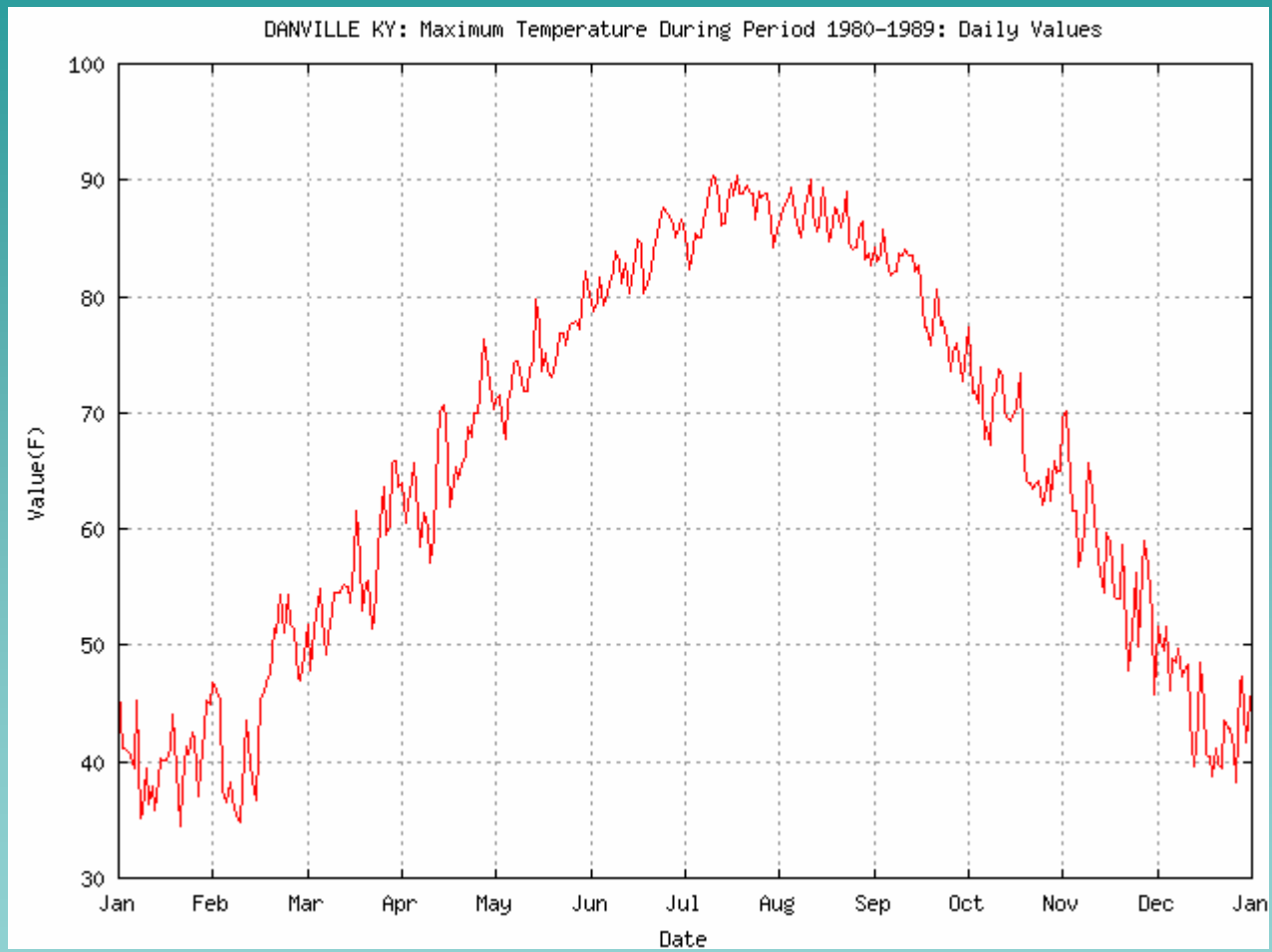
Choose a state

Alabama	Arizona	Arkansas
California	Colorado	Connecticut
Delaware	Florida	Georgia
Idaho	Illinois	Indiana
Iowa	Kansas	Kentucky
Louisiana	Maine	Maryland
Massachusetts	Michigan	Minnesota
Mississippi	Missouri	Montana
Nebraska	Nevada	New Hampshire
New Jersey	New Mexico	New York
North Carolina	North Dakota	Ohio
Oklahoma	Oregon	Pennsylvania
Rhode Island	South Carolina	South Dakota
Tennessee	Texas	Utah
Vermont	Virginia	Washington
West Virginia	Wisconsin	Wyoming

Construct your own city climatologies

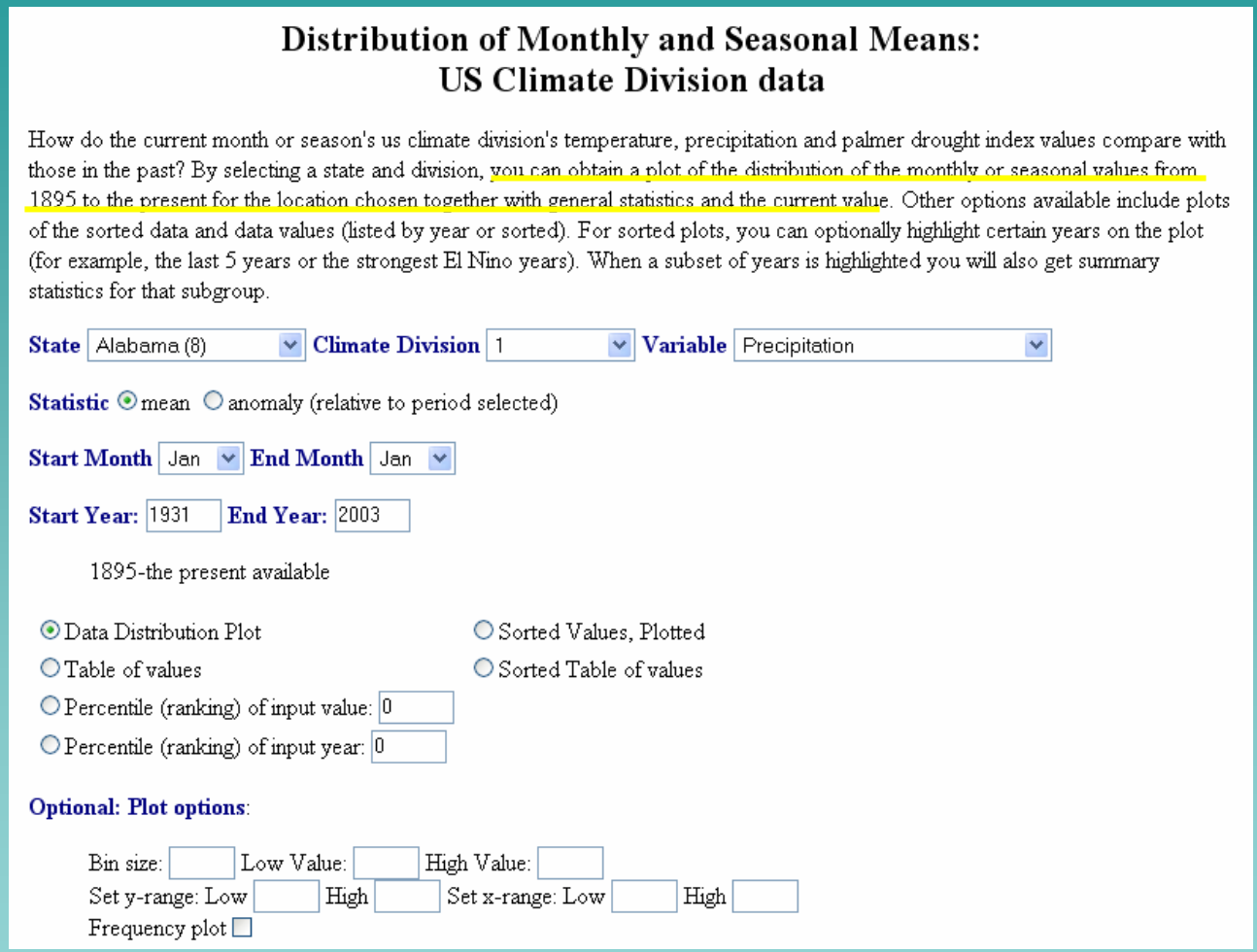
http://www.cdc.noaa.gov/USstation/

CDC U.S. Climatologies



http://www.cdc.noaa.gov/USstation/

CDC Comparative Climatology



Distribution of Monthly and Seasonal Means:
US Climate Division data

How do the current month or season's us climate division's temperature, precipitation and palmer drought index values compare with those in the past? By selecting a state and division, you can obtain a plot of the distribution of the monthly or seasonal values from 1895 to the present for the location chosen together with general statistics and the current value. Other options available include plots of the sorted data and data values (listed by year or sorted). For sorted plots, you can optionally highlight certain years on the plot (for example, the last 5 years or the strongest El Nino years). When a subset of years is highlighted you will also get summary statistics for that subgroup.

State Alabama (8) **Climate Division** 1 **Variable** Precipitation

Statistic ◉ mean ○ anomaly (relative to period selected)

Start Month Jan **End Month** Jan

Start Year: 1931 **End Year:** 2003

1895-the present available

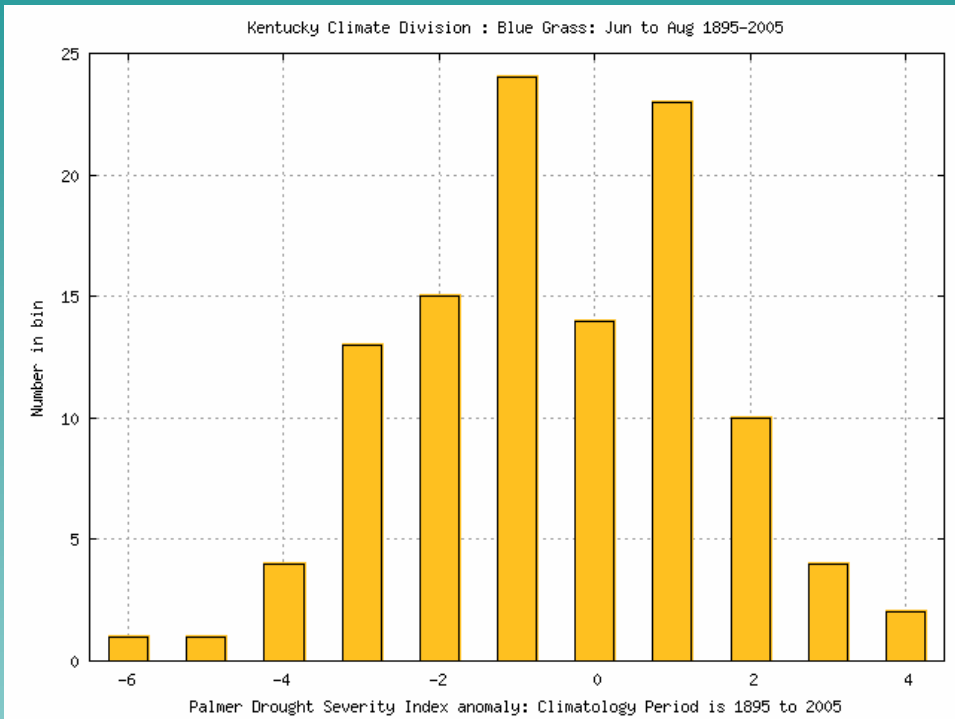
◉ Data Distribution Plot ○ Sorted Values, Plotted
○ Table of values ○ Sorted Table of values
○ Percentile (ranking) of input value: 0
○ Percentile (ranking) of input year: 0

Optional: Plot options:

Bin size: Low Value: High Value:
Set y-range: Low High Set x-range: Low High
Frequency plot ☐

http://www.cdc.noaa.gov/PDF/Climdiv/

CDC Comparative Climatology



You chose a subset of years to compare

1936: **-4.49**
1954: **-3.65**
1983: **-1.04**
1988: **-1.03**
2005: **0.08**

The average for your set of years was -2.02

http://www.cdc.noaa.gov/PDF/Climdiv/

Local Work

http://weather.gov/bowlinggreen

http://weather.gov/lexington

http://weather.gov/louisville

Local Work

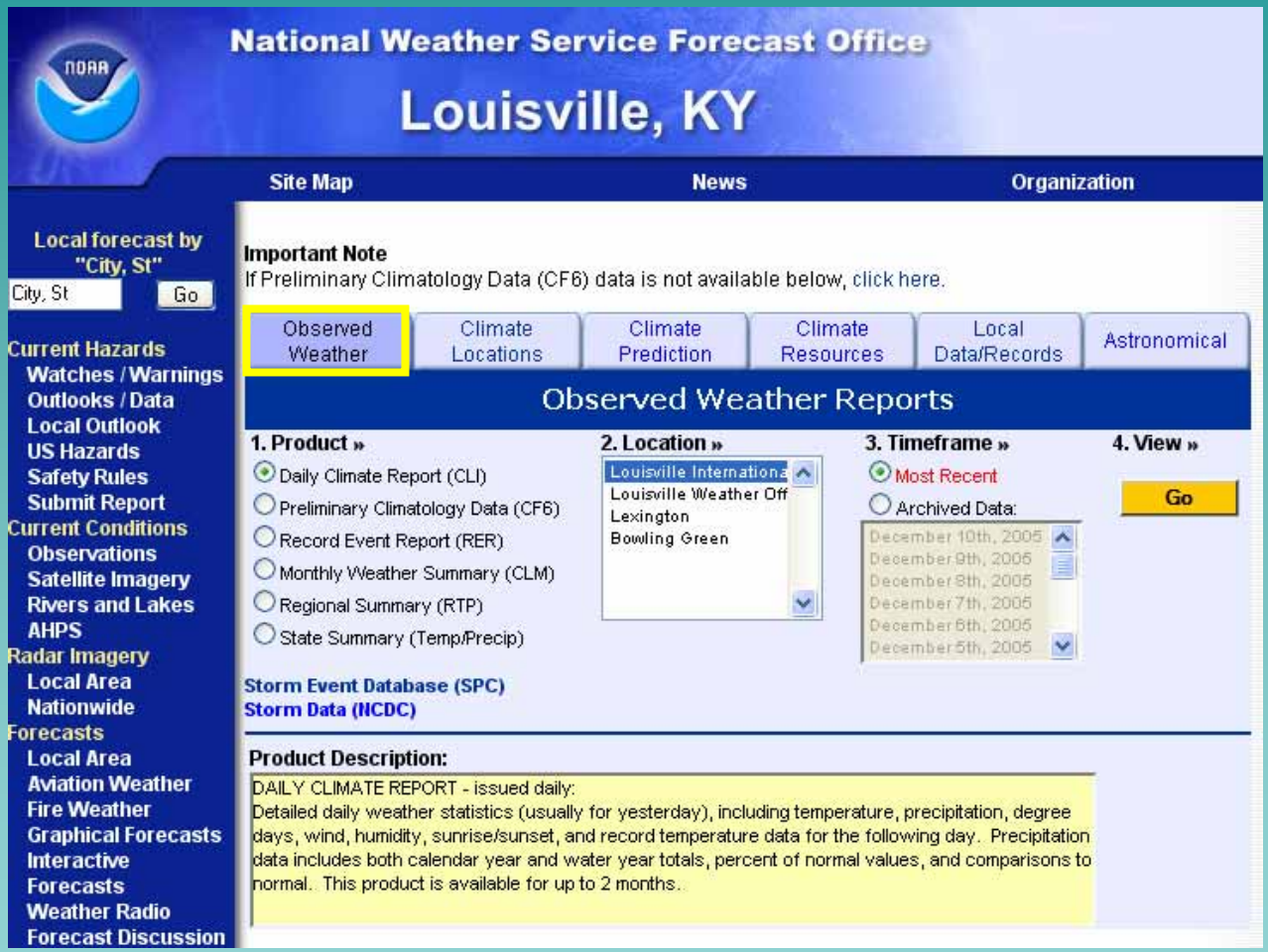
- Established a local Climate Team
  - Moving official observing site back to SDF
  - Handling erroneous ASOS data
  - Research projects
  - LMK Climate webpage
  - Team Leader went to Kansas City for training

http://www.weather.gov/climate/index.php?wfo=lmk

Local Work

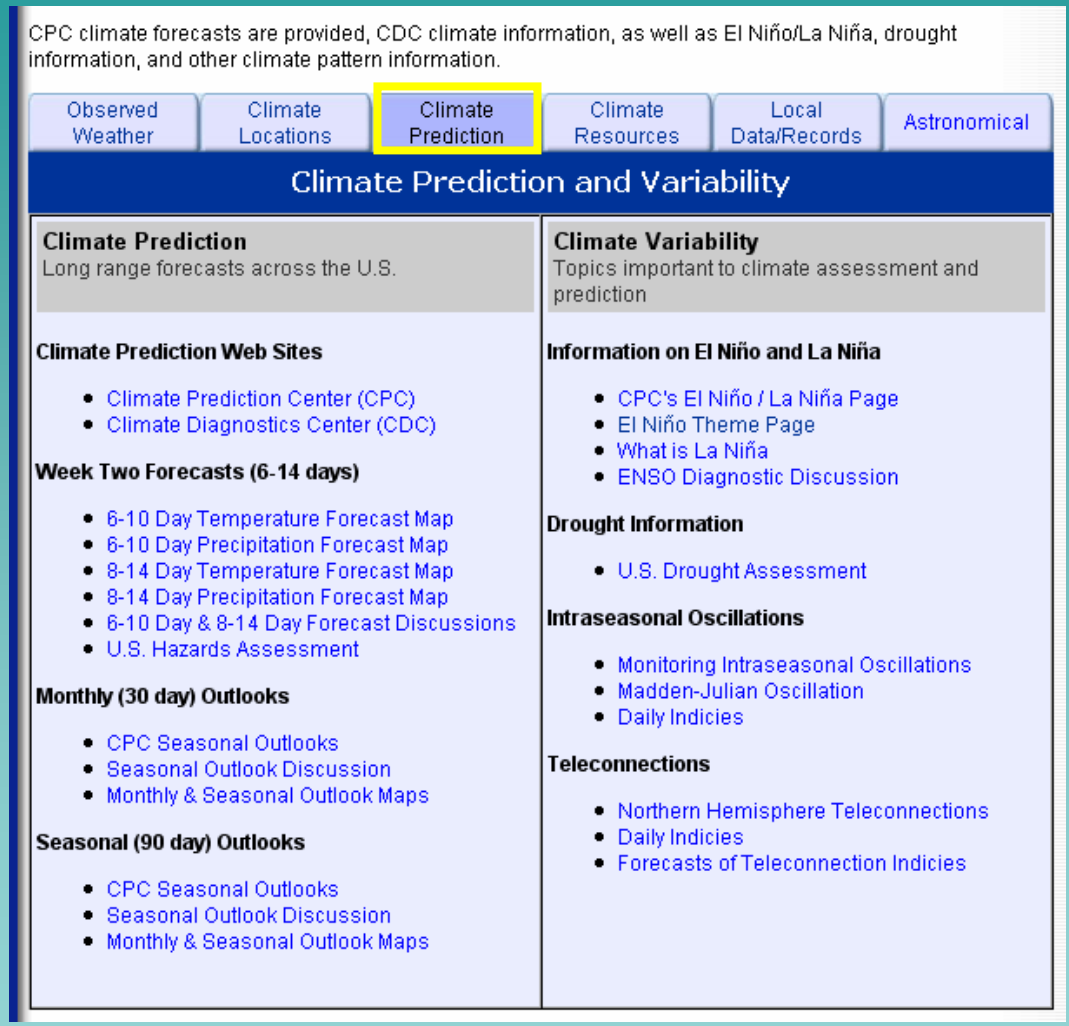
http://www.weather.gov/climate/index.php?wfo=lmk

Local Work



http://www.weather.gov/climate/index.php?wfo=lmk

Local Work



CPC climate forecasts are provided, CDC climate information, as well as El Niño/La Niña, drought information, and other climate pattern information.

Observed Weather | Climate Locations | Climate Prediction | Climate Resources | Local Data/Records | Astronomical

Climate Prediction and Variability

Climate Prediction
Long range forecasts across the U.S.

Climate Prediction Web Sites

- Climate Prediction Center (CPC)
- Climate Diagnostics Center (CDC)

Week Two Forecasts (6-14 days)

- 6-10 Day Temperature Forecast Map
- 6-10 Day Precipitation Forecast Map
- 8-14 Day Temperature Forecast Map
- 8-14 Day Precipitation Forecast Map
- 6-10 Day & 8-14 Day Forecast Discussions
- U.S. Hazards Assessment

Monthly (30 day) Outlooks

- CPC Seasonal Outlooks
- Seasonal Outlook Discussion
- Monthly & Seasonal Outlook Maps

Seasonal (90 day) Outlooks

- CPC Seasonal Outlooks
- Seasonal Outlook Discussion
- Monthly & Seasonal Outlook Maps

Climate Variability
Topics important to climate assessment and prediction

Information on El Niño and La Niña

- CPC's El Niño / La Niña Page
- El Niño Theme Page
- What is La Niña
- ENSO Diagnostic Discussion

Drought Information

- U.S. Drought Assessment

Intraseasonal Oscillations

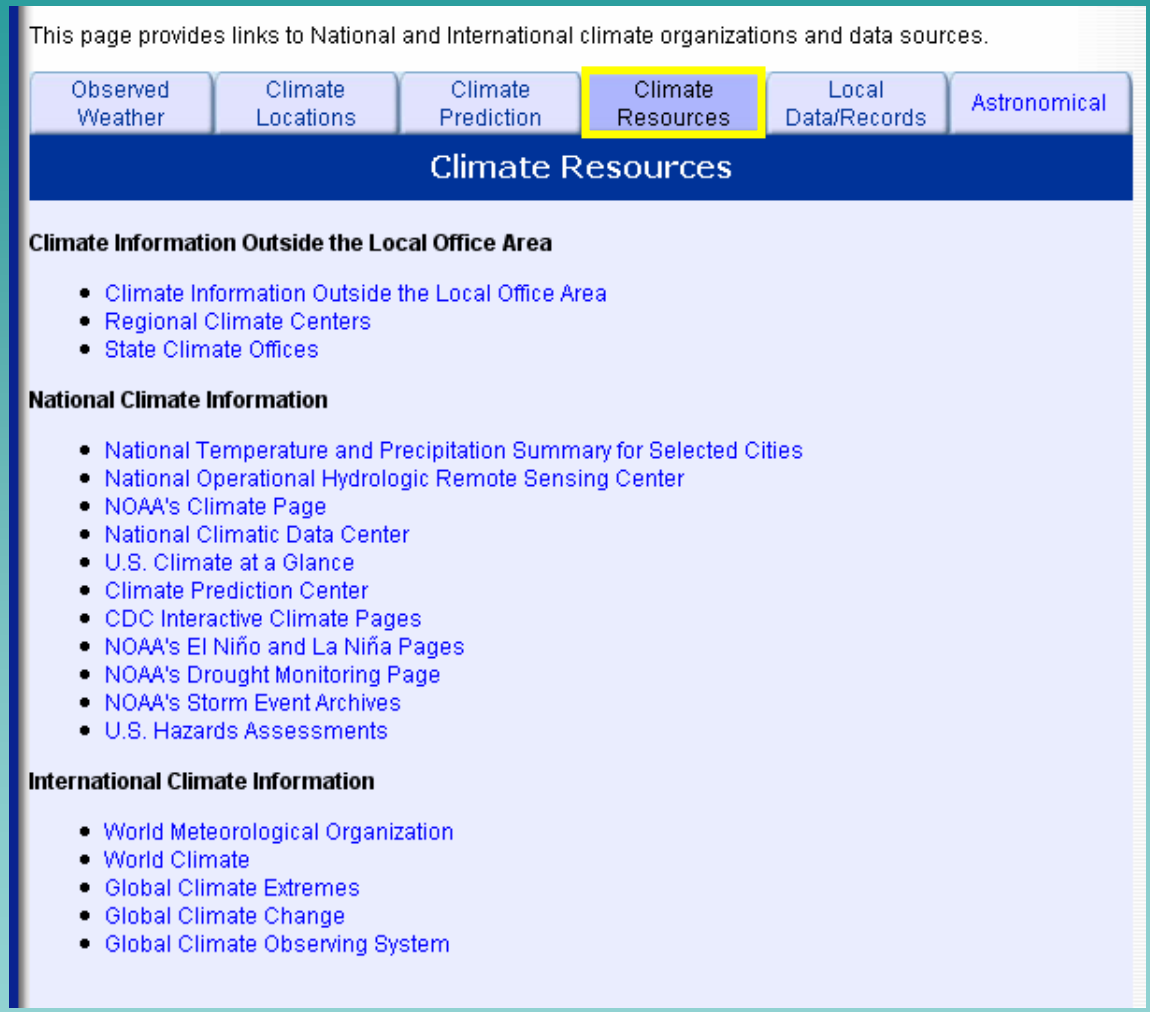
- Monitoring Intraseasonal Oscillations
- Madden-Julian Oscillation
- Daily Indicies

Teleconnections

- Northern Hemisphere Teleconnections
- Daily Indicies
- Forecasts of Teleconnection Indicies

http://www.weather.gov/climate/index.php?wfo=lmk

Local Work



This page provides links to National and International climate organizations and data sources.

Observed Weather | Climate Locations | Climate Prediction | Climate Resources | Local Data/Records | Astronomical

Climate Resources

Climate Information Outside the Local Office Area

- Climate Information Outside the Local Office Area
- Regional Climate Centers
- State Climate Offices

National Climate Information

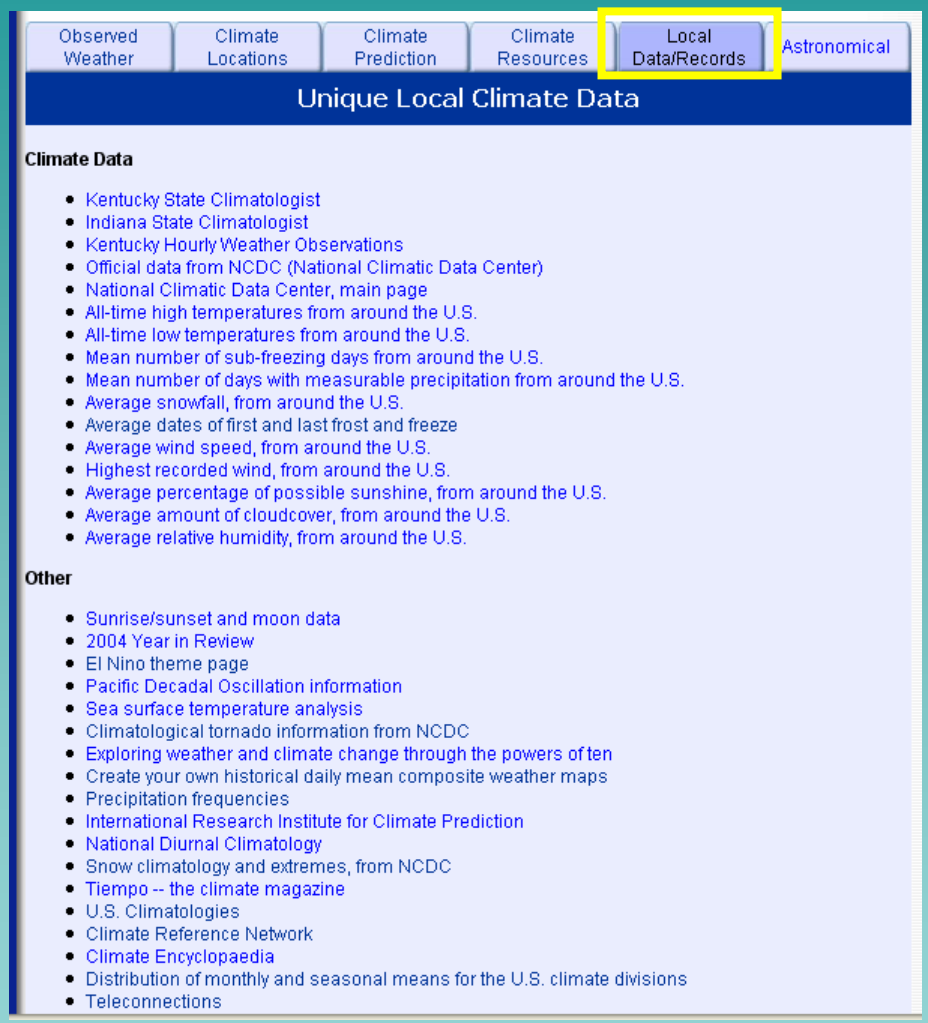
- National Temperature and Precipitation Summary for Selected Cities
- National Operational Hydrologic Remote Sensing Center
- NOAA's Climate Page
- National Climatic Data Center
- U.S. Climate at a Glance
- Climate Prediction Center
- CDC Interactive Climate Pages
- NOAA's El Niño and La Niña Pages
- NOAA's Drought Monitoring Page
- NOAA's Storm Event Archives
- U.S. Hazards Assessments

International Climate Information

- World Meteorological Organization
- World Climate
- Global Climate Extremes
- Global Climate Change
- Global Climate Observing System

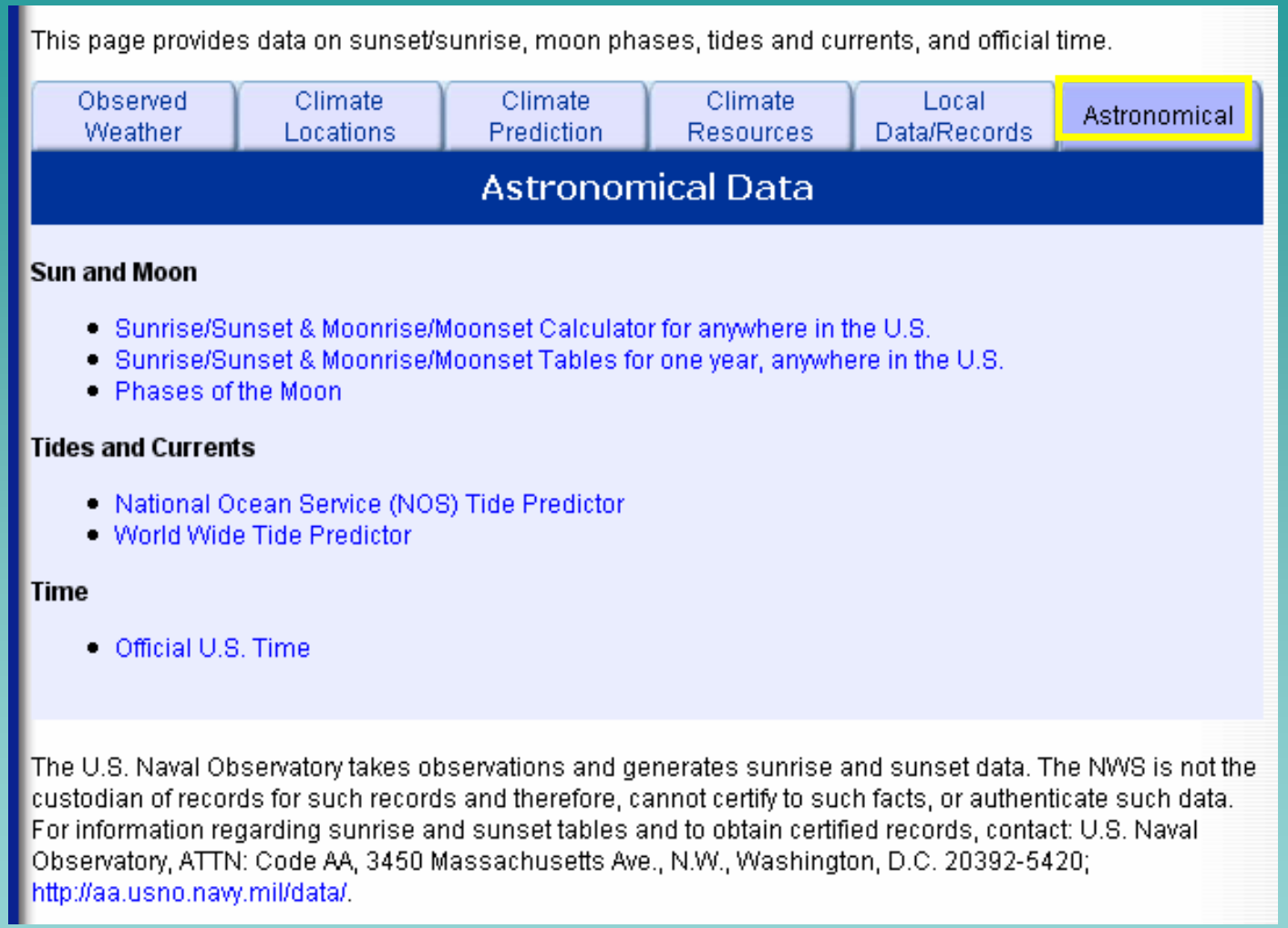
http://www.weather.gov/climate/index.php?wfo=lmk

Local Work



http://www.weather.gov/climate/index.php?wfo=lmk

Local Work



This page provides data on sunset/sunrise, moon phases, tides and currents, and official time.

Observed Weather | Climate Locations | Climate Prediction | Climate Resources | Local Data/Records | Astronomical

Astronomical Data

Sun and Moon

- Sunrise/Sunset & Moonrise/Moonset Calculator for anywhere in the U.S.
- Sunrise/Sunset & Moonrise/Moonset Tables for one year, anywhere in the U.S.
- Phases of the Moon

Tides and Currents

- National Ocean Service (NOS) Tide Predictor
- World Wide Tide Predictor

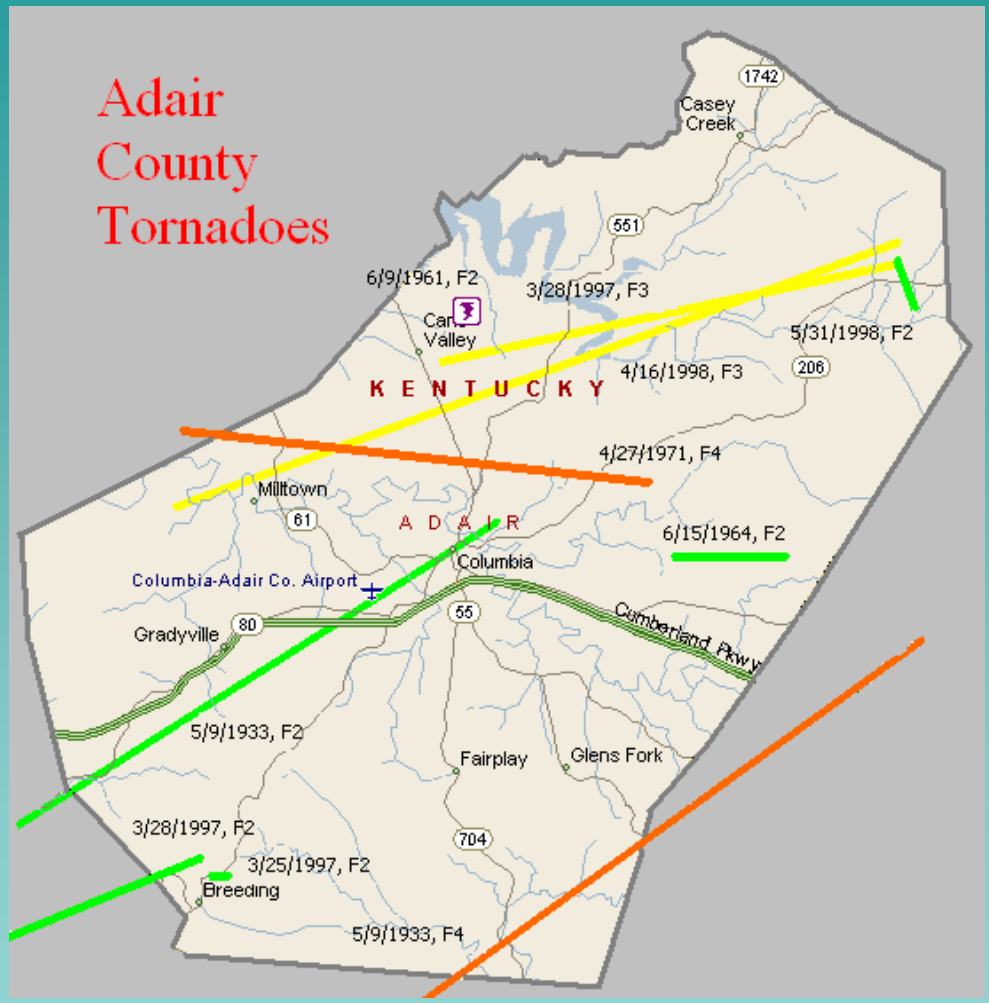
Time

- Official U.S. Time

The U.S. Naval Observatory takes observations and generates sunrise and sunset data. The NWS is not the custodian of records for such records and therefore, cannot certify to such facts, or authenticate such data. For information regarding sunrise and sunset tables and to obtain certified records, contact: U.S. Naval Observatory, ATTN: Code AA, 3450 Massachusetts Ave., N.W., Washington, D.C. 20392-5420; http://aa.usno.navy.mil/data/.

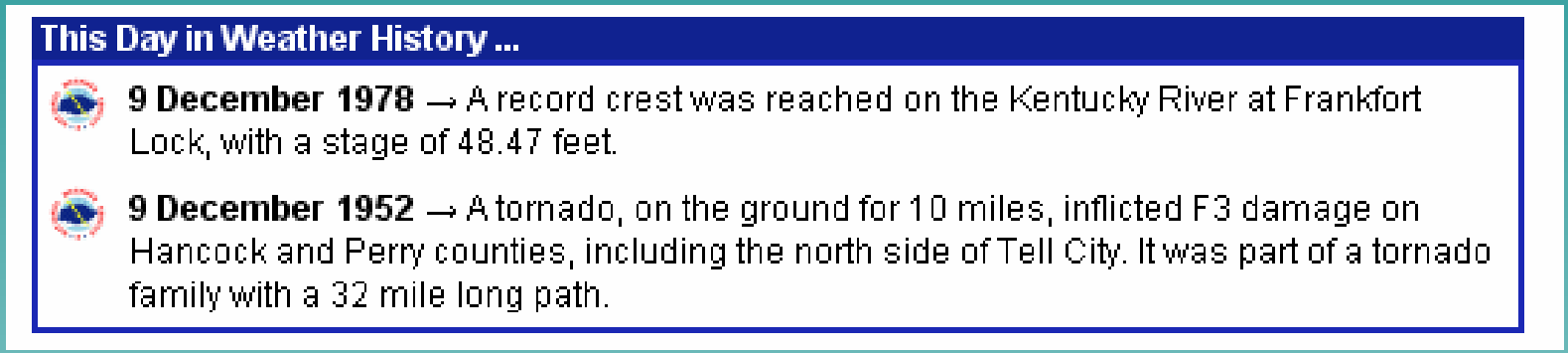
http://www.weather.gov/climate/index.php?wfo=lmk

Tornado Tracks



On the Web soon...

This Day in Weather History



About half-way down on the main LMK webpage

http://weather.gov/louisville

OHRFC Observed Precip and Precip Anomalies

Maps available for durations of:

- 1 hour
- 24 hours
- 48 hours
- 72 hours
- 96 hours
- Month-to-date
- 7days
- 30 days
- 60 days
- 90 days
- 180 days
- 365 days

http://weather.gov/louisville

Thank You