Three-month Probability of Exceedence Outlooks

Part 1 - Mission Connection

a. Product/Service Description. The Climate Prediction Center (CPC) issues a series of thirteen three-month probability of exceedence outlooks for temperature, precipitation, and heating and cooling degree days for the conterminous U.S.

b. Purpose/Intended Use. Since these outlooks pertain to the average temperature and total precipitation for the entire valid period and **not** to the variability within it, they will **not** help people planning events for specific dates or sub-periods. The outlooks will be of most use for economic and business planning, particularly when used with 30 year base period means.

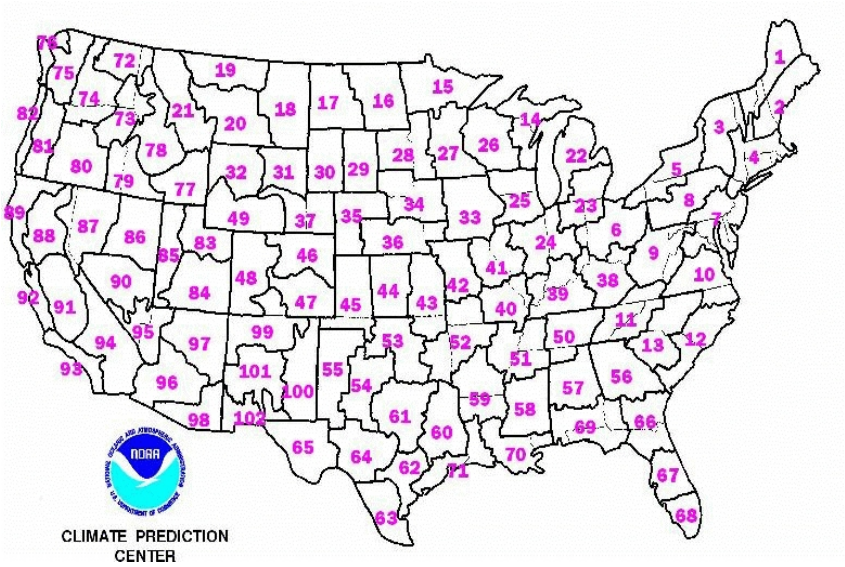
c. Audience.. The audience is primarily decision makers with some technical background in weather and climate sensitive activities sensitive to inter-seasonal and inter-annual climate variation (e.g. weather risk management, energy/utilities, agriculture, hydrology, etc.).

d. Presentation Format. CPC presented the outlooks as text tables over NWS dissemination systems.

e. Feedback.: Go to: http://www.cpc.ncep.noaa.gov/NWS-feedback-form.html

Part 2 - Technical

a. Format and Science Basis. CPC provides mean (or areal average mean) temperatures, total (or areal average total) precipitation amounts, and total (or areal average total) heating or cooling degree days for various probabilities of exceedence for a given city or climate outlook divisional area and three-month valid time. There are the 102 climate outlook divisions in the conterminous U.S. These outlooks are statistically consistent with the three-month temperature and precipitation outlooks.



CPC climate outlook divisions in contiguous U.S.

The outlook city locations are as follows:

City	ID	City	ID	City	ID
Albuquerque NM	ABQ	Atlanta GA	ATL	Austin TX	AUS
Birmingham AL	BHM	Bismark ND	BIS	Boston MA	BOS
Buffalo NY	BUF	Charlotte NC	CLT	Chicago IL	MDW
Cincinnati OH	LUK	Cleveland OH	CLE	Columbus OH	CMH
Dallas TX	DAL	Dayton OH	DAY	Denver CO	DEN
Detroit MI	DET	El Paso TX	ELP	Fresno CA	FAT
Grand Rapids MI	GRR	Greensboro NC	GSO	Hartford CT	HFD
Houston TX	HOU	Indianapolis IN	IND	Jacksonville FL	JAX
Kansas City MO	MCI	Las Vegas NV	LAS	Los Angeles CA	LAX
Louisville KY	SDF	Memphis TN	MEM	Miami FL	MIA
Milwaukee WI	MKE	Minneapolis MN	MSP	Nashville TN	BNA
New Orleans LA	MSY	New York City NY	LGA	Norfolk VA	ORF
Oklahoma City OK	OKC	Omaha NE	OMA	Orlando FL	MCO
Phoenix AZ	PHX	Philadelphia PA	PHL	Pittsburgh PA	PIT
Portland OR	PDX	Providence RI	PVD	Raleigh NC	RDU
Rochester NY	ROC	Sacramento CA	SAC	Saint Louis MO	STL
Salt Lake City UT	SLC	San Antonio TX	SAT	San Diego	SAN
San Francisco CA	SFO	Seattle WA	SEA	Tampa FL	TPA
Washington DC	DCA	West Palm Beach FL	PBI	Anchorage AK	ANC
Annette AK	ANN	Barrow AK	BRW	Cold Bay AK	CDB
Fairbanks AK	FAI	Juneau AK	JNU	Kotzebue AK	OTZ
Nome AK	OME	Yakutat AK	YAK		

For each climate outlook divisional area or city, CPC provides mean temperatures (°F in tenths), total precipitation amounts (inches in hundredths), and total heating and cooling degree days (whole °F) having various probabilities of exceedence from 98 to 2 percent. CPC also provides the 50 percent climatological probability of exceedence values. The following are generic examples:

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TEMPERATURE PROB. OF EXCEEDENCE OUTLOOKS - (outlook divisions or cities)
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
300 PM E-T THU mo. day 20--

VALID (three-month period)

...TEMPERATURE IN FAHRENHEIT...

#. (division or city) NAME     CLIM                              LINE1
 98   95   90   80   70   60   50   40   30   20   10   5    2 LINE2
-------------------------------------------------------------------
1.(name)                       xx.x
 xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x xx.x
2. etc..
$$
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------- DEGREE DAY PROB. OF EXCEEDENCE OUTLOOKS - (division areas or cities)
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
300 PM E-T THU mo. day 20--

VALID (three-month period)

...-------- DEGREE DAYS IN FAHRENHEIT - 65F BASIS...

#.  DIVISION NAME             CLIM                              LINE1
98   95   90   80   70   60   50   40   30   20   10   5    2  LINE2
-------------------------------------------------------------------
1. (name)                      xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
2. etc..
$$
```

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PRECIPITATION PROB. OF EXCEEDENCE OUTLOOKS - OUTLOOK DIVISIONS
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
300 PM E-T THU mo. day 20--

VALID (three-month period)

...INCHES TIMES 100...

#.  DIVISION NAME             CLIM                              LINE1
98   95   90   80   70   60   50   40   30   20   10   5    2  LINE2
-------------------------------------------------------------------
1. (name)                      xxxx
xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx xxxx
2. etc..
$$
```

b Availability. These are scheduled products. CPC issues these 13 outlooks simultaneously once a month on the third Thursday of the month around 8:30 a.m. Eastern local time. CPC does not issue updates or amendments. They will issue corrections as needed. CPC issues these products on NWS dissemination systems under the following product IDs:

Lead time is indicated by the number in the WMO heading and last letter in the AWIPS ID. (i.e. 01 and A have a lead time of 0.5 month, 02 and B have a lead time of 1.5 months, etc.)

...Outlook Divisional Areas...

Temperature		Precipitation	
WMO Heading	AWIPS ID	WMO Heading	AWIPS ID
FXUS(01-13)KWNC	POELT(A-M)	FXUS(61-73) KWNC	POELP(A-M)

Heating Degree Days		Cooling Degree Days	
WMO Heading	AWIPS ID	WMO Heading	AWIPS ID
FXUS(28-40)KWNC	POELH(A-M)	FXUS(41-53) KWNC	POELC(A-M)

...Site Specific Cities...

Temperature		No Precipitation Outlooks
WMO Heading	AWIPS ID	
FXUS(01-13)KWNC	POECT(A-M)	

Heating Degree Days		Cooling Degree Days	
WMO Heading	AWIPS ID	WMO Heading	AWIPS ID
FXUS(28-40)KWNC	POECH(A-M)	FXUS(41-53) KWNC	POECC(A-M)

This information is also available on the CPC web site at
http://www.cpc.ncep.noaa.gov/pacdir/NFORdir/HOME3.html

c. Other information

Valid Time. CPC will issue the 13 outlooks with lead times from 0.5 months to 12.5 months. For example, in mid-January, CPC will issue Three-Month Outlooks for February through April, March through May, April through June, and so on to February through April of the following year.

Product Expiration Time. The 0.5 month lead time outlook expires at the beginning of the valid time of that outlook. The other outlooks expire when the next set of outlooks are issued (i.e. on the third Thursday of the following month).

Creation Software. CPC uses a statistical postprocessing software program.