Climate Outlook and Summary
NWS Central Region

Thursday, March 21, 2013

- NEUTRAL ENSO conditions are favored through summer 2013, which makes for a challenging/low confidence climate outlook
- For April:
  - The highest chances for above normal temperatures are in the eastern Great Lakes and in Kansas.
  - The highest chances for above normal precipitation are in the Great Lakes.
- For April through June:
  - The highest chances for above normal temperatures are in the southern Central Plains.
  - The highest chances for above normal precipitation are in the Great Lakes toward the Corn Belt.
- Areas of drought improvement or some drought improvement are indicated across Central Region, with persistence likely in the far west.

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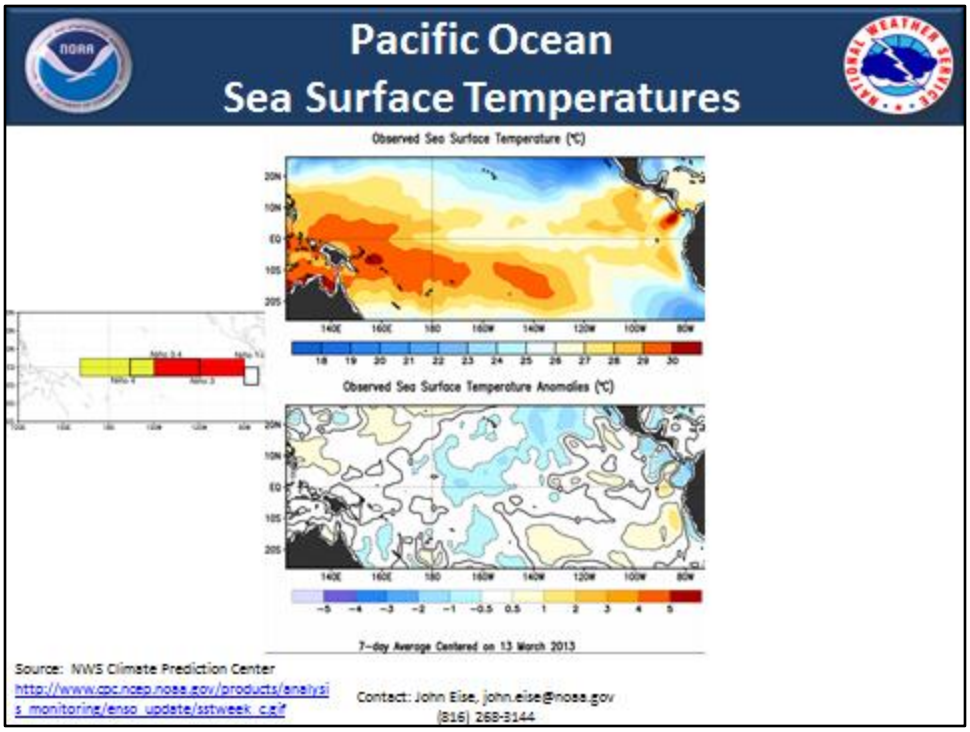
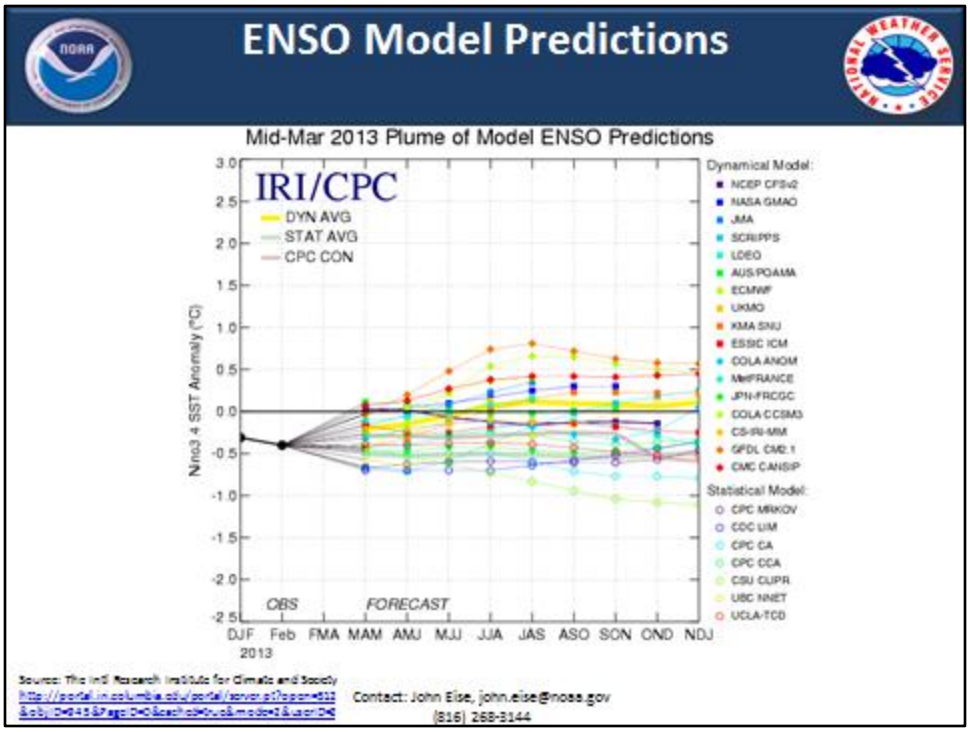
Some mixed signals on how far to take that wetness signal into the Plains. Need a period of above normal rainfall with unfrozen ground to provide relief in drought areas.

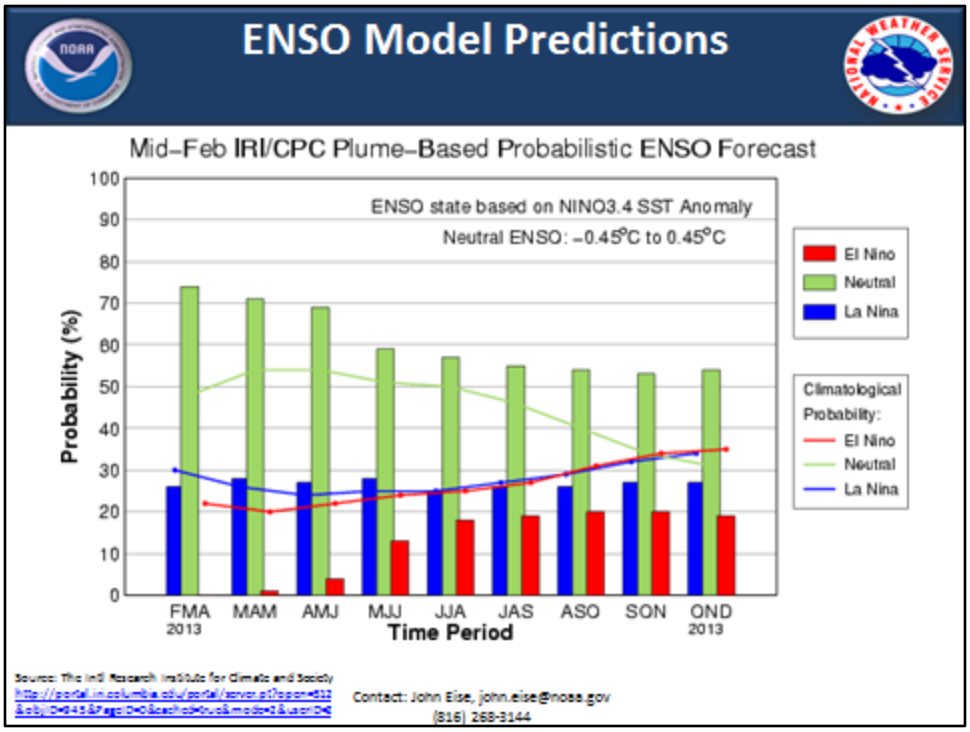


Sea surface temperatures (SSTs) across the east equatorial Pacific have reflected below-average conditions over the past month, with weakening anomalies recently. All of the weekly SST departures in the Niño regions ranged between -0.4 ºC in the Niño 4 region to +0.5 ºC across the Niño 1+2 region as of March 15th, and the last three-monthly SST anomaly in Niño 3.4 was -0.6 ºC in December through February.

SST anomalies have trended toward a positive change in the eastern Pacific and negative in the west-central Pacific. Positive sub-surface SST anomalies have expanded eastward. In general, the oceanic and atmospheric anomalies recently noted all reflect cool, ENSO-neutral conditions.

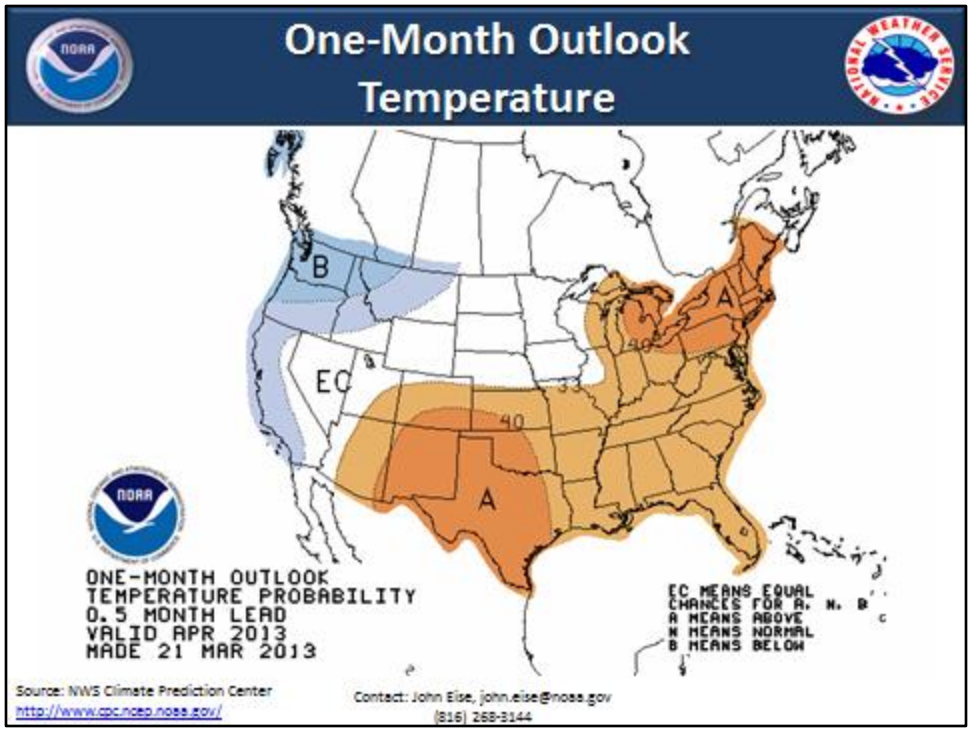


The latest ENSO dynamical model forecasts of Niño 3.4 SST anomalies are clustered around 0 ºC to +0.5 ºC, which would indicate ENSO-neutral conditions favored at least through summer 2013. The spread in the models is increasing on both the positive and negative sides in the late summer through early winter.



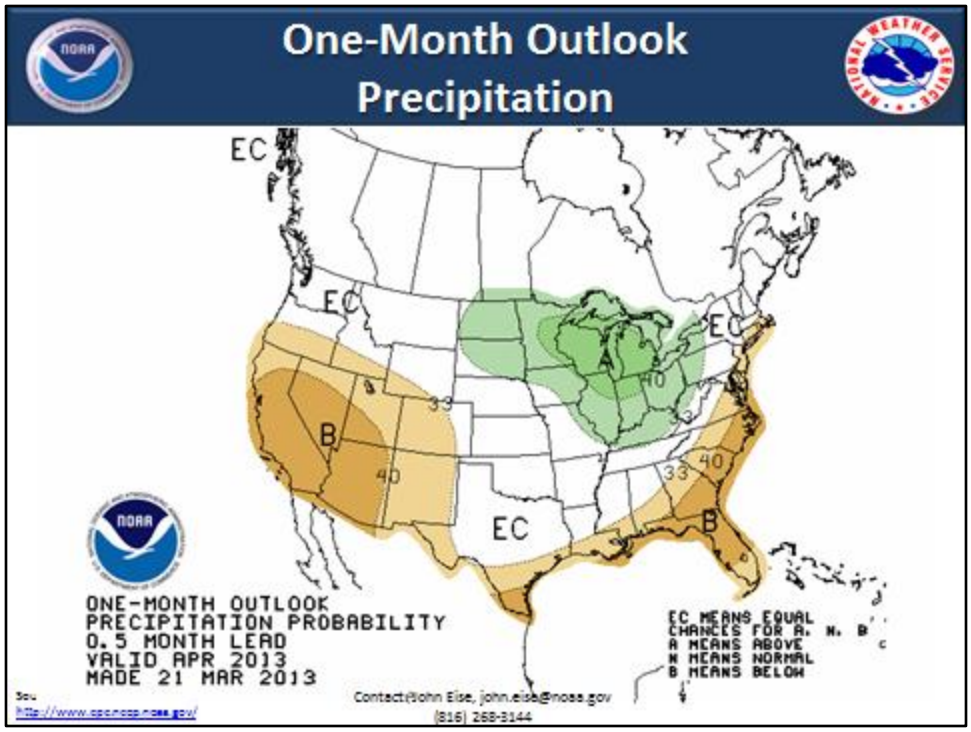
The probability of ENSO-neutral conditions through the spring 2013 is around 70-75%, with a 20-25% chance of La Niña and a 0-5% chance of El Niño.

By late summer or early fall 2013, the chances of La Niña and El Niño both over around 20-25%. Neutral conditions are still favored at over 50%.



For April, there is a 40-50% chance of temperatures in the warmest third compared to 1981-2010 climatology for much of lower Michigan as well as southwest Kansas and southern Colorado, with a 17-27% chance for temperatures in the coldest third and a 33% chance for temperatures in the middle third. Elsewhere in areas south and east of a line from the U.P. of Michigan through central Illinois and across the Kansas/Nebraska border to northern Colorado, there is a 33-40% chance of temperatures in the warmest third compared to 1981-2010 climatology, with a 27-33% chance for temperatures in the coldest third and a 33% chance for temperatures in the middle third.

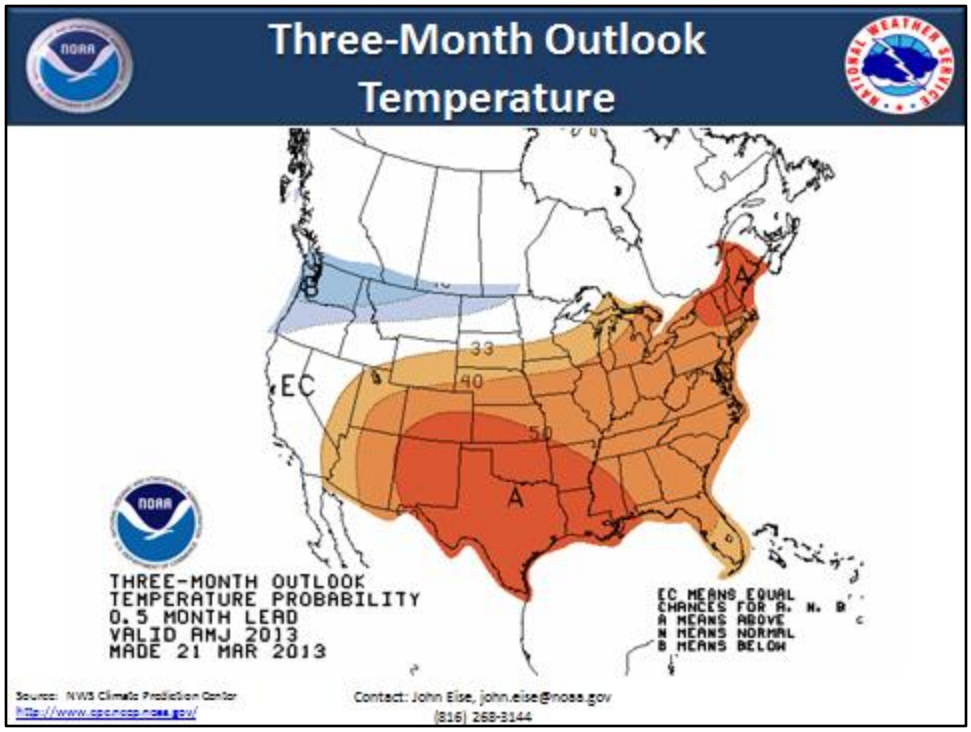
Equal chances of above, near, and below normal temperatures are forecast elsewhere in the central U.S.



For April, there is a 40-50% chance of precipitation in the wettest third compared to 1981-2010 climatology for much of Michigan and Wisconsin into eastern Minnesota, with a 17-27% chance for precipitation in the driest third and a 33% chance for precipitation in the middle third. Elsewhere in areas north and east of a line from the Dakotas through central Iowa and along the Mississippi River valley in Missouri toward the Ohio River valley, there is a 33-40% chance of precipitation in the wettest third compared to 1981-2010 climatology, with a 27-33% chance for precipitation in the driest third and a 33% chance for precipitation in the middle third.

There is a 33-40% chance for precipitation in the driest third compared to 1981-2010 climatology across much of Colorado into southwest Wyoming, with a 27-33% chance for precipitation in the wettest third and a 33% chance for precipitation in the middle third.

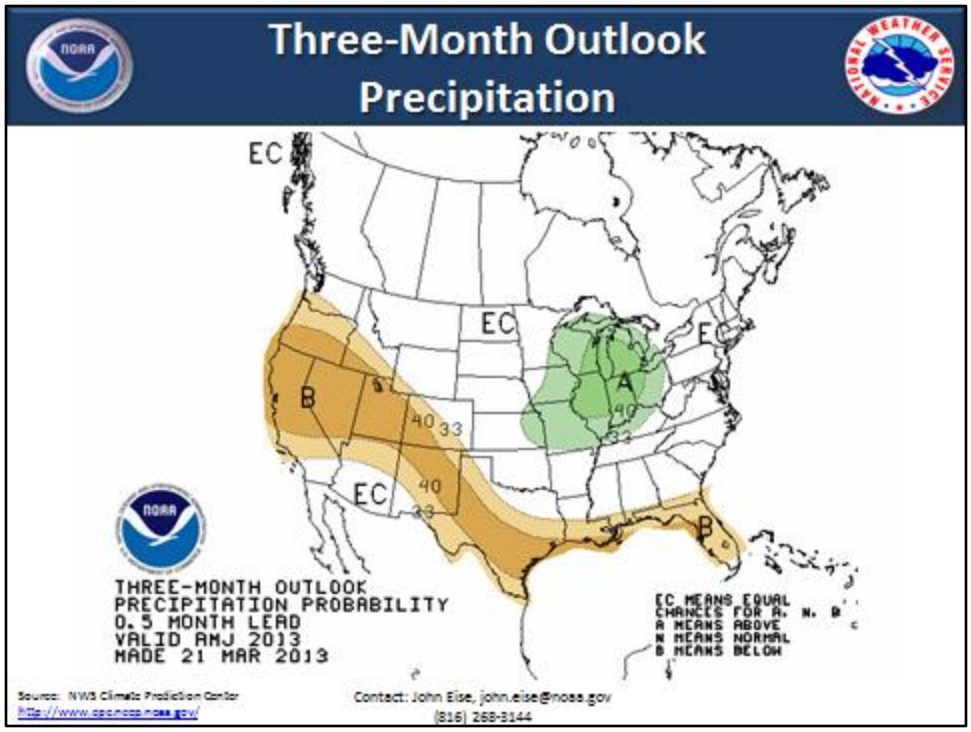
Equal chances of above, near, and below normal temperatures are forecast elsewhere in the central U.S.



For April through June, there is a 50-60% chance for temperatures in the warmest third compared to 1981-2010 climatology across the southern half of Kansas and Colorado, with a 7-17% chance for temperatures in the coldest third and a 33% chance for temperatures in the middle third. Elsewhere south of a line from northern Michigan through northern Iowa and northern Nebraska to the Colorado/Wyoming border, there is a 40-50% chance for temperatures in the warmest third compared to 1981-2010 climatology, with a 17-27% chance for temperatures in the coldest third and a 33% chance for temperatures in the middle third. Elsewhere south of a line from the U.P. of Michigan through southern Minnesota and northern South Dakota to northern Wyoming, there is a 33-40% chance of temperatures in the warmest third compared to 1981-2010 climatology, with a 27-33% chance for temperatures in the coldest third and a 33% chance for temperatures in the middle third.

There is a 33-40% chance of temperatures in the coldest third compared to 1981-2010 climatology in northern North Dakota, with a 27-33% chance of temperatures in the warmest third and a 33% chance of temperatures in the middle third.

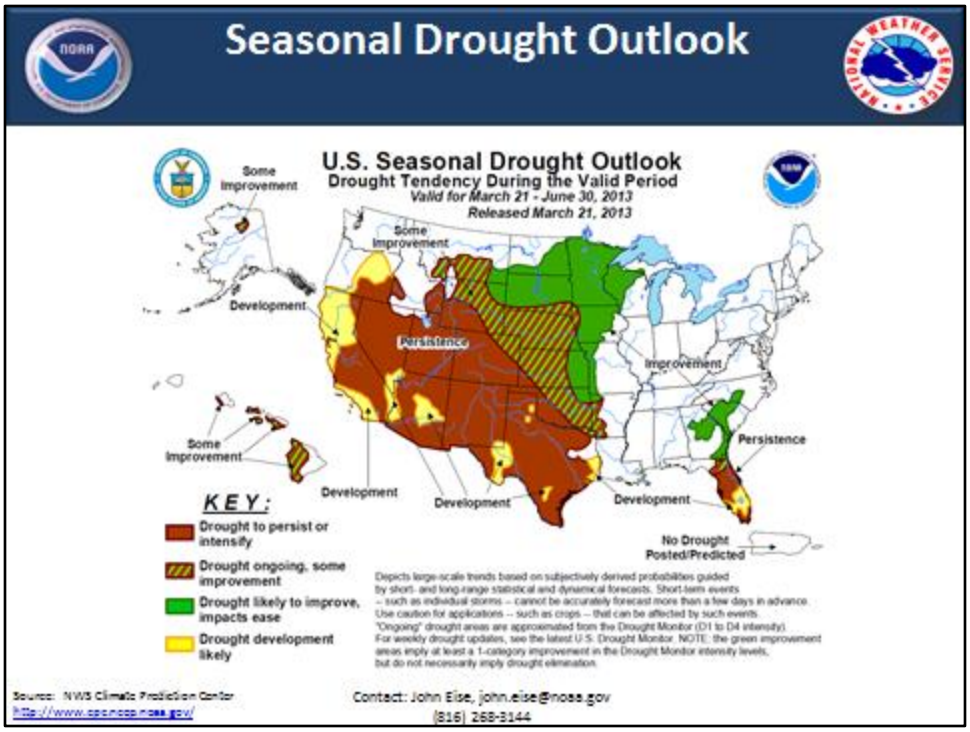
Equal chances of above, near, and below normal temperatures are forecast in a band between those two regions in the north central U.S.



For April, there is a 40-50% chance of precipitation in the wettest third compared to 1981-2010 climatology for much of lower Michigan and southeast Wisconsin into much of Illinois and Indiana, with a 17-27% chance for precipitation in the driest third and a 33% chance for precipitation in the middle third. Elsewhere in areas north and east of a line from Wisconsin to eastern Kansas and across Missouri to the Ohio River Valley, there is a 33-40% chance of precipitation in the wettest third compared to 1981-2010 climatology, with a 27-33% chance for precipitation in the driest third and a 33% chance for precipitation in the middle third.

There is a 40-50% chance for precipitation in the driest third compared to 1981-2010 climatology in southwest Colorado, with a 17-27% chance for precipitation in the wettest third and a 33% chance for precipitation in the middle third. Elsewhere south of a line from southwest Wyoming across the southwest half of Colorado, there is a 33-40% chance for precipitation in the driest third compared to 1981-2010 climatology, with a 27-33% chance for precipitation in the wettest third and a 33% chance for precipitation in the middle third.

Equal chances of above, near, and below normal temperatures are forecast elsewhere in the central U.S.



The most recent Seasonal Drought Outlook shows improvement across much of the upper Midwest and northern Plains into eastern Kansas and western Missouri. Some improvement is possible across the rest of Kansas, Nebraska, northeast Colorado, and parts of Wyoming. Drought persistence is likely from southwest Kansas through the rest of Colorado into southwest Wyoming.

Seasonal Outlook Interpretation Guide

The National Weather Service Seasonal Climate Outlooks predict the probability of conditions being among the warmest/coldest or wettest/driest (table, right) terciles of years compared to the period of 1981-2010.

Temperature		Precipitation	
Social Science	**Climate Science**	**Social Science**	**Climate Science**
Uncommonly Cold	Below Normal Tercile	Uncommonly Wet	Above Normal Tercile
Uncommonly Warm	Above Normal Tercile	Uncommonly Dry	Below Normal Tercile
Moderate (Neither Warm Nor Cold)	Normal Tercile	Moderate (Neither Wet nor Dry)	Normal Tercile

The outlooks indicate probability of being in three specific categories in reference to the 30-year climatology from 1981-2010 (table, right).

Precip	Temp	Probability of Occurence: Above	Near	Below	Most likely category
		80.0%-90.0%	16.7%-06.7%	03.3%	"Above"
		70.0%-80.0%	26.7%-16.7%	03.3%	"Above"
		60.0%-70.0%	33.3%-26.7%	06.7%-03.3%	"Above"
		50.0%-60.0%	33.3%	16.7%-06.7%	"Above"
		40.0%-50.0%	33.3%	26.7%-16.7%	"Above"
		33.3%-40.0%	33.3%	33.3%-26.7%	"Above"
		33.3%-30.0%	33.3%-40.0%	33.3%-30.0%	"Near Normal"
		30.0%-25.0%	40.0%-50.0%	30.0%-25.0%	"Near Normal"
		33.3%-26.7%	33.3%	33.3%-40.0%	"Below"
		26.7%-16.7%	33.3%	40.0%-60.0%	"Below"
		16.7%-06.7%	33.3%	50.0%-60.0%	"Below"
		06.7%-03.3%	33.3%-26.7%	60.0%-70.0%	"Below"
		03.3%	26.7%-16.7%	70.0%-80.0%	"Below"
		03.3%	16.7%-06.7%	80.0%-90.0%	"Below"
		33.3%	33.3%	33.3%	"Equal Chances"

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Seasonal Outlook
Mega Division Climate Forecast Map

CPC outlooks are made at the scale of climate megadivisions (figure, right)

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Seasonal Outlook Additional Information

The following links show some of the ENSO composites that were used to make these forecasts.

CPC ENSO Box & Whisker Analysis:

http://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/box_whiskers/index.php

El Nino and La Niña-Related Winter Features over North America:

http://www.cpc.ncep.noaa.gov/products/precip/CWlink/ENSO/composites/EC_LNT_index.shtml

Winter Composites:

http://www.cpc.noaa.gov/products/analysis_monitoring/ensocycle/nawinter.shtml

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