Long Range Forecast 2018: Drought, Deluge, or “Normal”?
Current Status
Precipitation % of “Normal” Past 30 Days

30-day Accumulated Prop % of Normal 12DEC2017–10JAN2018

Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1981–2010)
Precipitation % of “Normal” Past 90 Days

90-day Accumulated Prop % of Normal 13OCT2017–10JAN2018

Data Source: CPC Unified (gauge-based & 0.5x0.5 deg resolution) Precipitation Analysis Climatology (1981–2010)
Regional Drought Continues to Expand

U.S. Drought Monitor
South

January 9, 2018
(Released Thursday, Jan. 11, 2018)
Valid 7 a.m. EST

Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brian Fuchs
National Drought Mitigation Center

http://droughtmonitor.unl.edu/
A Look at The Oceans
Moderate La Nina ongoing with cold water west of South America. “Warm” water southwest of California causing problems. PDO & AMO remain positive...for now.
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Pacific Decadal Oscillation Phases

Causes Drought for Parts of Western High Plains & Southward...

Relaxes Drought for Parts of Western High Plains & Southward
### Atlantic Multi-decadal Oscillation

**Negative = Cold  Positive = Warm**

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Pertaining to Drought Frequency (McCabe 2004)
Blue = Lower Frequency  Red = Higher Frequency

25% = normal drought frequency
ENSO Forecast Update!

Weather
5280
Colder than average water most prevalent since October, with "warming" taking place now...
Something to watch...
Warmer than average water beneath the surface...

Equatorial Temperature Anomaly (°C)
Pentad centered on 09 NOV 2017
ENSO Plumes Ensemble Favors La Niña Into Spring

Mid-Dec 2017 Plume of Model ENSO Predictions

IRI/CPC

NINO3.4 SST Anomaly (°C)

STAT MODELS:
- PSD-CU LIM
- CPC MRKOV
- CPC CA
- CSU CLIPR
- UBC NNET
- FSU REGR
- UCLA-TCD
- STAT AVG
- CPC CONSOL

DYN MODELS:
- NASA GMAO
- NCEP CFSv2
- JMA
- BCC_CSM11m
- SAUDI-KAU
- LDEO
- AUS/POAMA
- ECMWF
- UKMO
- KMA SNU
- IOCAS ICM
- COLA CCSM4
- MetFRANCE
- SINTEX-F
- CS-IRI-MM
- GFDL CM2.1
- GFDL FLOR
- DYN AVG:

season
Long Range Forecast:
NMME Computer Model Forecast
NMME Model Precipitation Forecast
Green = Wetter Brown = Drier  White = “Average”

NMME prob fcst Prate IC=201801 for lead 1 2018 Feb

Legend:
- Green: Above
- Brown: Below
- White: Neutral
NMME Model Precipitation Forecast

Green = Wetter Brown = Drier  White = “Average”

NMME prob fcast Prate IC=201801 for lead 2 2018 Mar
NMME Model Precipitation Forecast
Green = Wetter Brown = Drier   White = “Average”
NMME Model Precipitation Forecast
Green = Wetter Brown = Drier  White = “Average”

NMME prob fcst Prate IC=201801 for lead 4 2018 May
NMME Model Precipitation Forecast
Green = Wetter  Brown = Drier  White = “Average”
NMME Model Precipitation Forecast
Green = Wetter Brown = Drier  White = “Average”
NMME Model Precipitation Forecast

Green = Wetter  Brown = Drier  White = “Average”

NMME prob fcst Prate IC=201801 for lead 7 2018 Aug
Long Range Forecast:
JAMSTEC Computer Model Forecast

Weather 5280
JAMSTEC Model Precipitation Forecast

Green = Wetter
Brown = Drier
White = “Average”

Predicted MAM2018 tprep anom. from 1jan2018 (9-member)
JAMSTEC Model Precipitation Forecast
Green = Wetter Brown = Drier White = “Average”

Predicted JJA2018 tprep anom. from 1jan2018 (9-member)
JAMSTEC Model Precipitation Forecast
Green = Wetter Brown = Drier White = “Average”

Predicted SON2018 tprep anom. from 1jan2018 (9-member)
Long Range Forecast: CFSv2 Computer Model Forecast
CFSv2 Model Precipitation Forecast

Green = Wetter  Brown = Drier  White = “Average”

NCEP CFSv2 Precipitation [inches] Monthly Mean Forecast Departure
4 Daily Ensemble Runs Averaged from: 06Z06JAN2018 --> 06Z16JAN2018 10-day Chunk
Target Month: APRIL 2018

Precipitation (shaded) -- Monthly Average
NCEP CFSv2 384x190 Surface Flux Thinned Gaussian Forecast Grid
CFSv2 Model Precipitation Forecast

Green = Wetter
Brown = Drier
White = “Average”

NCEP CFSv2 Precipitation [inches] Monthly Mean Forecast Departure
4 Daily Ensemble Runs Averaged from: 06Z06JAN2018 --> 06Z16JAN2018 10-day Chunk
Target Month: JULY 2018

Precipitation (shaded) -- Monthly Average
NCEP CFSv2 384x190 Surface Flux Thinned Gaussian Forecast Grid
CFSv2 Model Precipitation Forecast
Green = Wetter Brown = Drier  White = “Average”

NCEP CFSv2 Precipitation [inches] Monthly Mean Forecast Departure
4 Daily Ensemble Runs Averaged from: 06Z06JAN2018 ---> 06Z16JAN2018 10-day Chunk
Target Month: AUGUST 2018
CFSv2 Model Precipitation Forecast

Green = Wetter Brown = Drier  White = “Average”

NCEP CFSv2 Precipitation [inches] Monthly Mean Forecast Departure
4 Daily Ensemble Runs Averaged from: 06Z06JAN2018 --> 06Z16JAN2018 10-day Chunk
Target Month: SEPTEMBER 2018
• **My Thoughts**…

• La Niña continues through spring, but likely has peaked. Models VERY unsure of future ENSO state.

• Neutral or any El Niño development doesn’t guarantee immediate drought relief.

• Regional drought development will likely get worse before it gets better…especially WEST.

• Pacific is not in a cold state (+PDO) & favors drought relaxation at some point. When?
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• E-Mail Anytime
• Twitter @BrianBledsoe
• Need weather for your biz? Just ask for a quote...
• www.weather5280.com