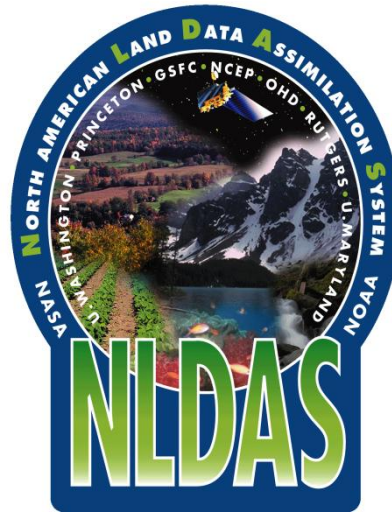


# **Comparison of NLDAS-2 and NLDAS2.5 Drought Monitor – A Preliminary Comparison for Ensemble Mean**



**Youlong Xia**

**20 July 2017 NLDAS teleconference**

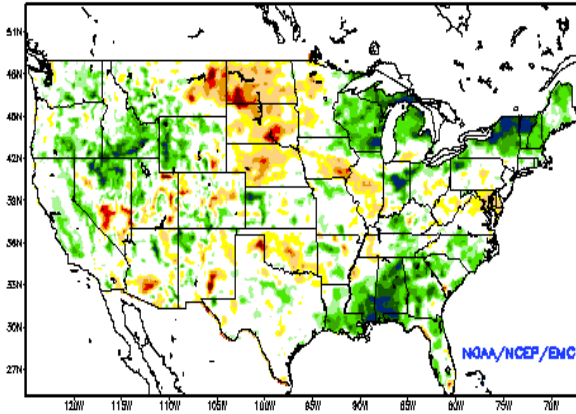
**01 July 2017**

**Soil Moisture and Total runoff Comparison  
Percentile**

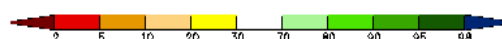
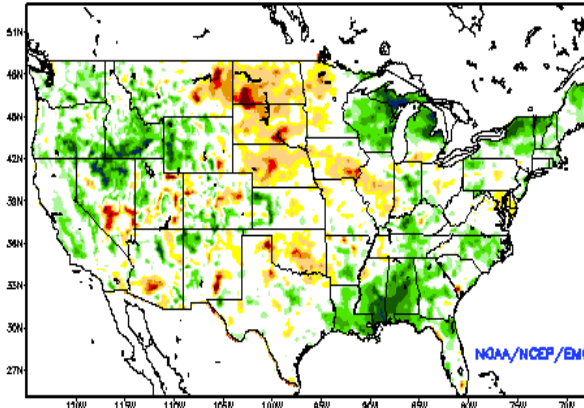
# Soil Soisture Comparison – 01 July top 1m soil layer

## NLDAS-2

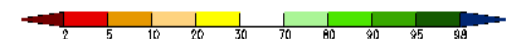
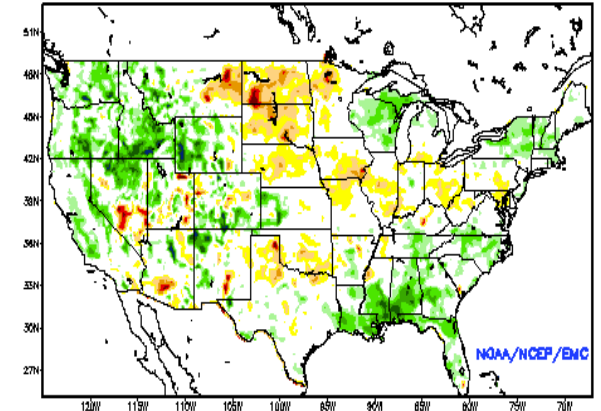
Ensemble-Mean – Current Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Ensemble-Mean – Past Week Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017

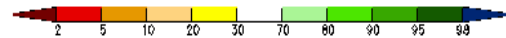
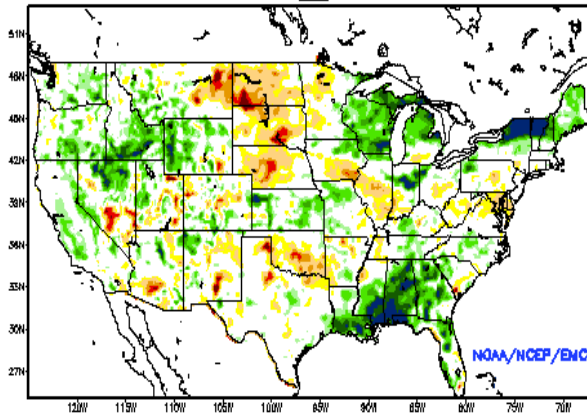


Ensemble-Mean – Past Month Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



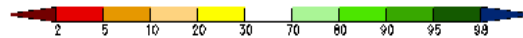
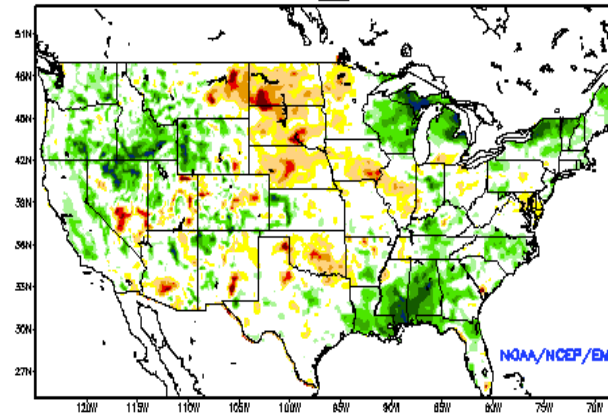
## NLDAS2.5

Ensemble-Mean – Current Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



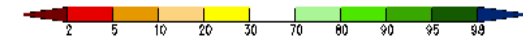
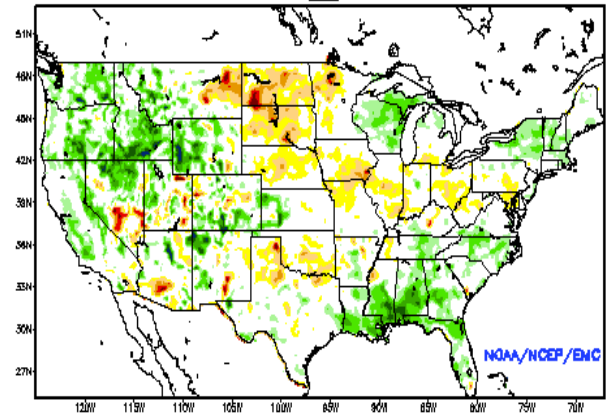
Day

Ensemble-Mean – Past Week Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Week

Ensemble-Mean – Past Month Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017

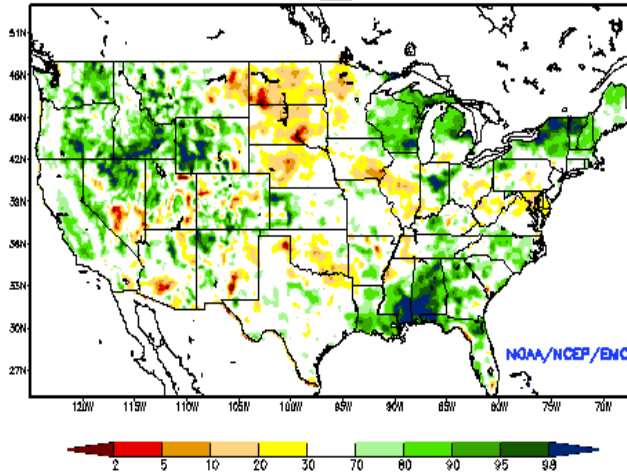


Month

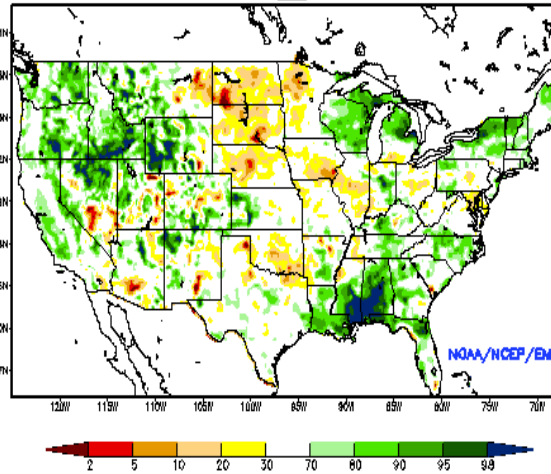
# Soil Moisture Comparison – 01 July Total Column soil layer

## NLDAS-2

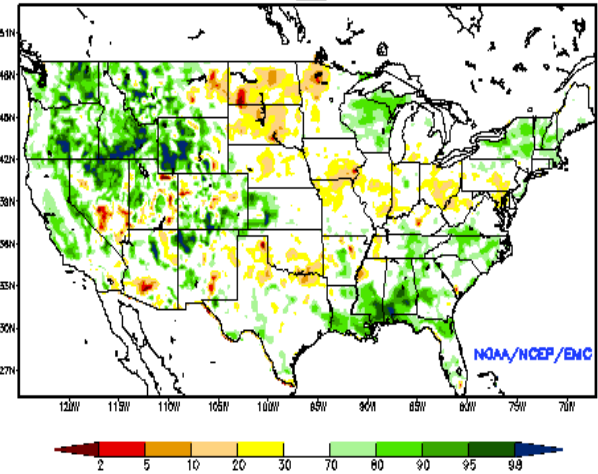
Ensemble-Mean – Current Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Ensemble-Mean – Past Week Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017

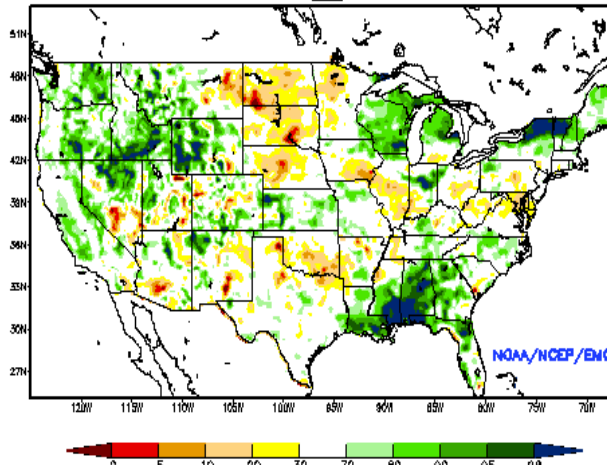


Ensemble-Mean – Past Month Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017

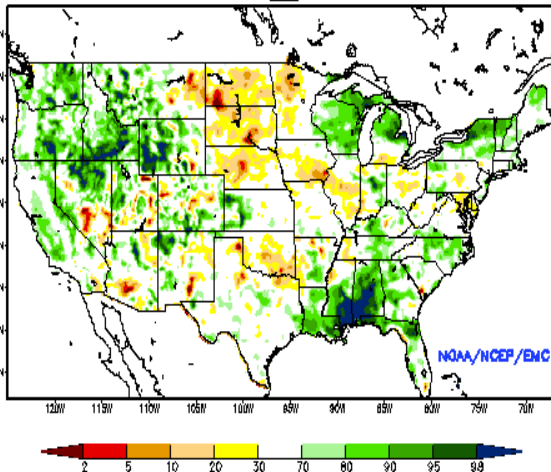


## NLDAS2.5

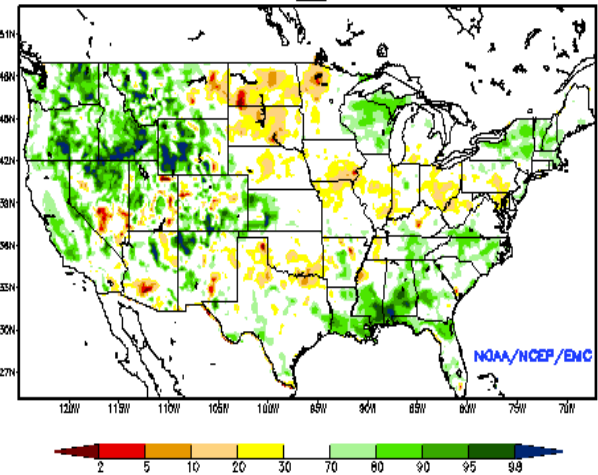
Ensemble-Mean – Current Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Ensemble-Mean – Past Week Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Ensemble-Mean – Past Month Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 01, 2017



Day

Week

Month

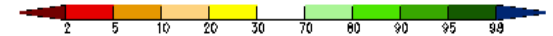
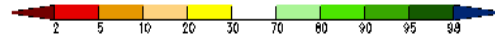
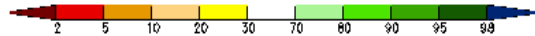
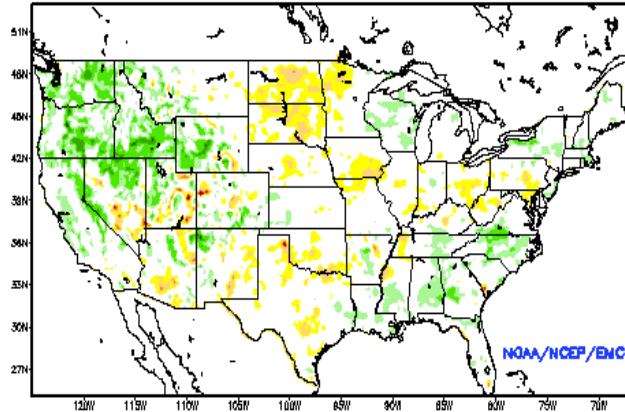
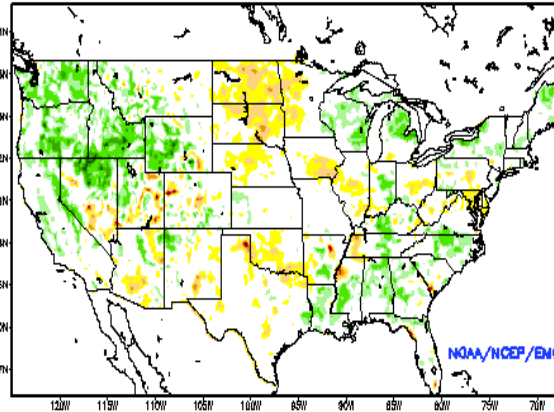
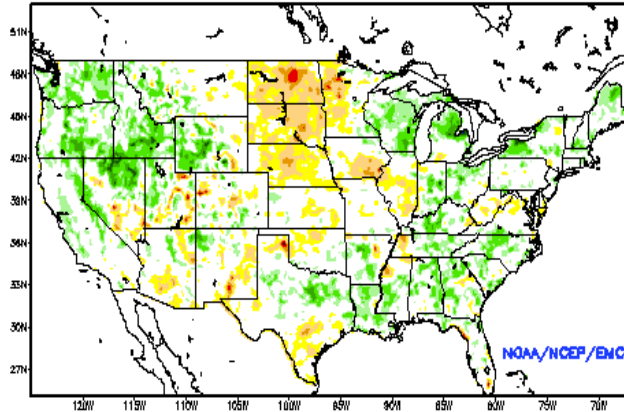
# 01 July Total Runoff Percentile Comparison

## NLDAS-2

Ensemble-Mean: Current Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017

Ensemble-Mean: Past Week Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017

Ensemble-Mean: Past Month Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017

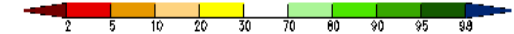
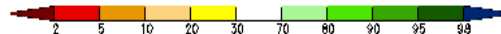
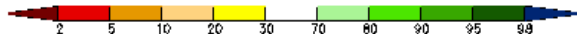
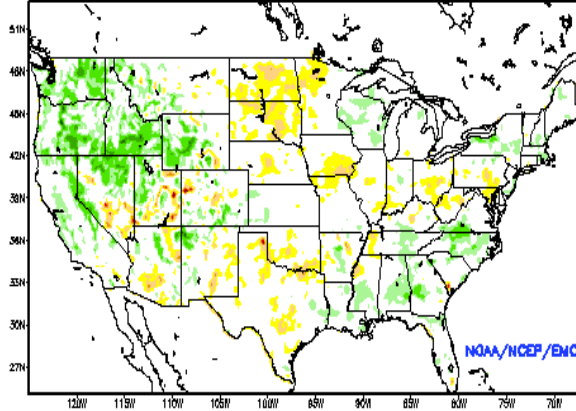
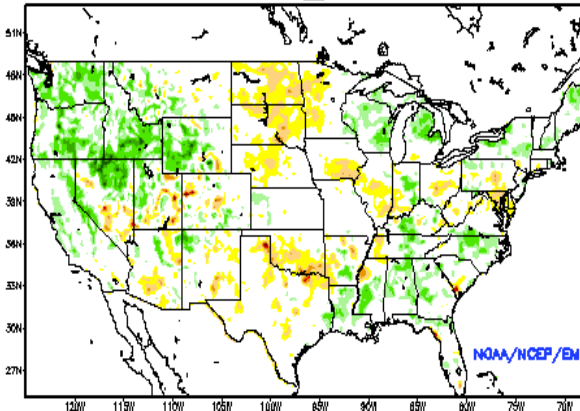
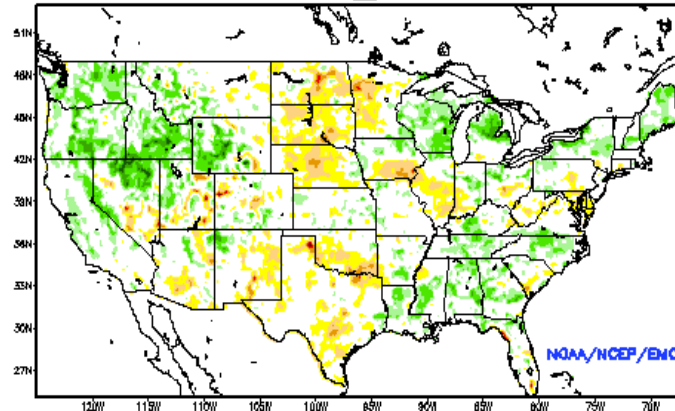


## NLDAS2.5

Ensemble-Mean: Current Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017

Ensemble-Mean: Past Week Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017

Ensemble-Mean: Past Month Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 01, 2017



Day

Week

Month

**15 July 2017**

**Soil Moisture and Total runoff Comparison  
Percentile**

# 15 July 2017 top 1m soil moisture percentile comparison

## NLDAS-2

Day

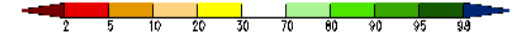
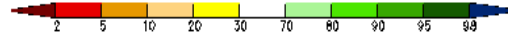
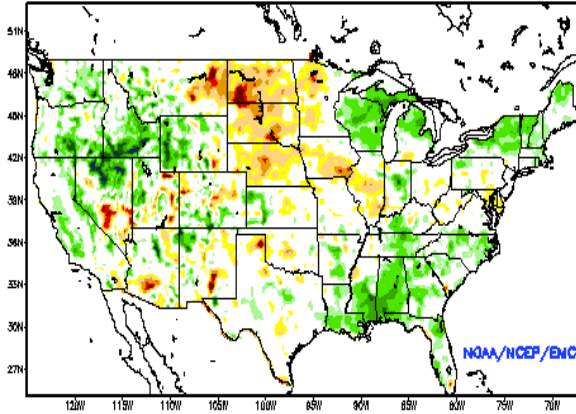
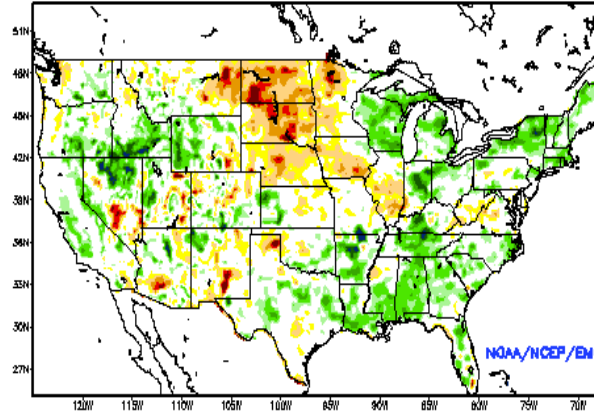
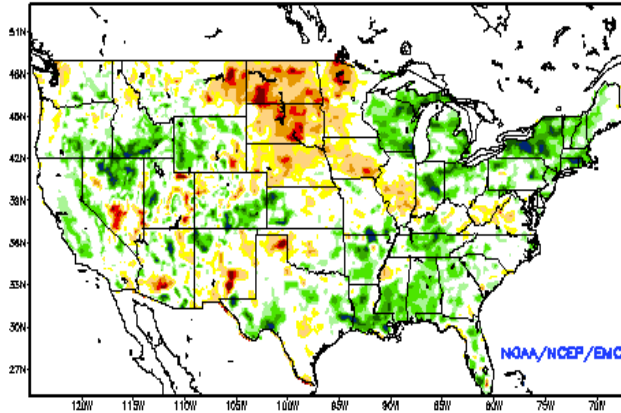
Week

Month

Ensemble-Mean - Current Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

Ensemble-Mean - Past Week Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

Ensemble-Mean - Past Month Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

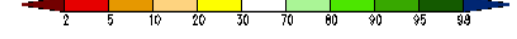
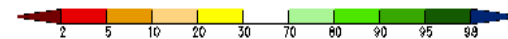
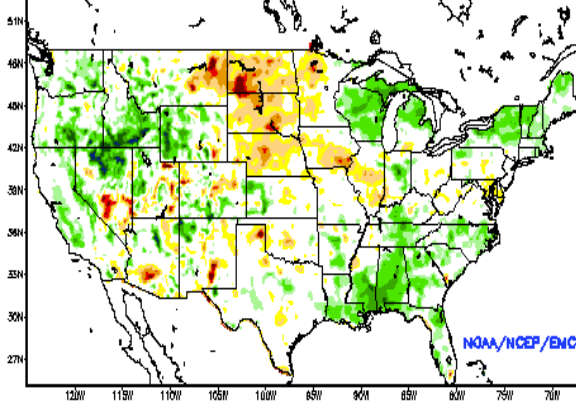
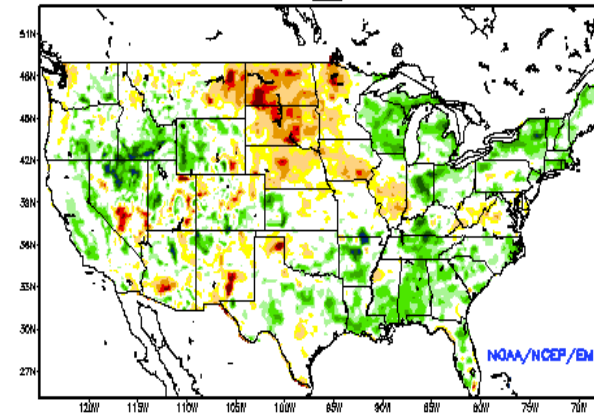
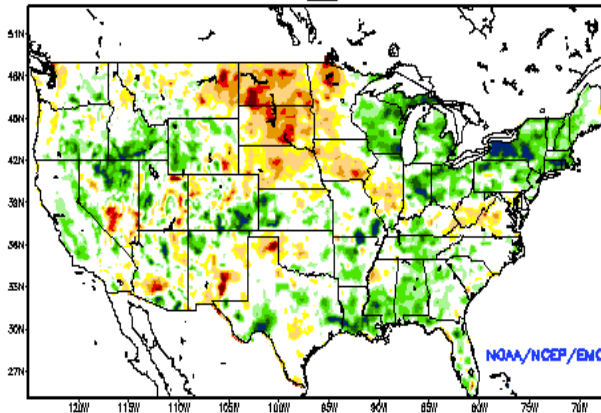


## NLDAS-2.5

Ensemble-Mean - Current Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

Ensemble-Mean - Past Week Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

Ensemble-Mean - Past Month Top 1M Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

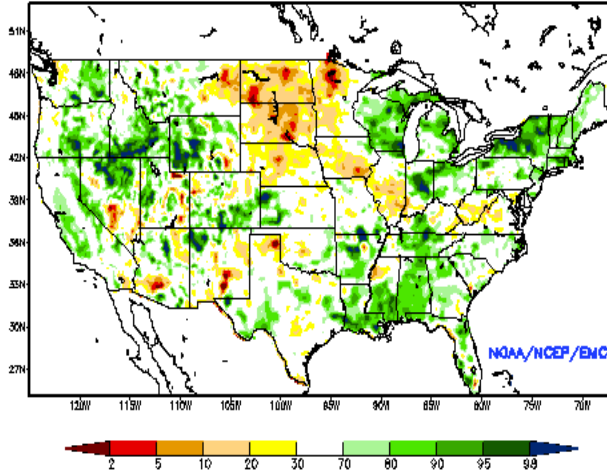


# 15 July total column soil moisture percentile comparison

## NLDAS-2

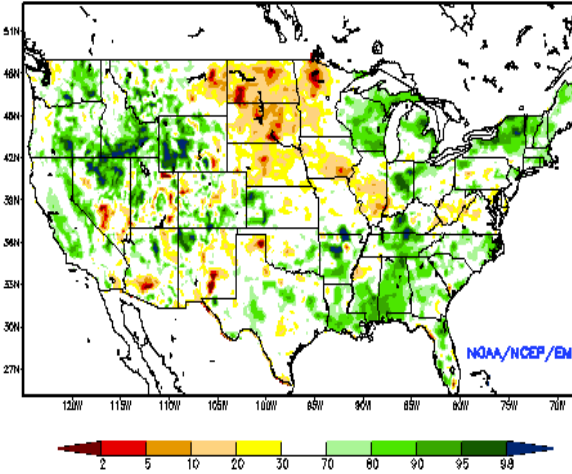
Day

Ensemble-Mean - Current Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017



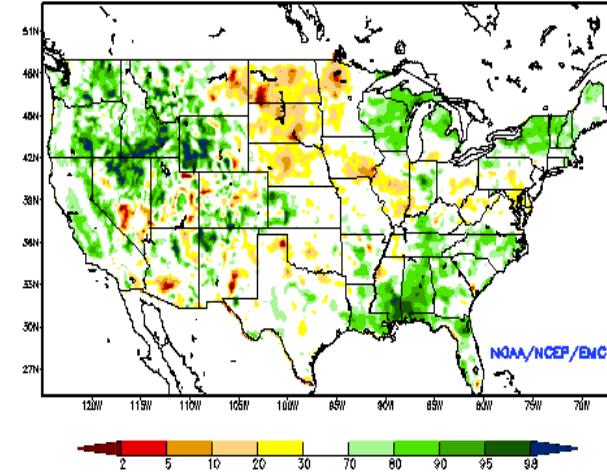
Week

Ensemble-Mean - Past Week Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017



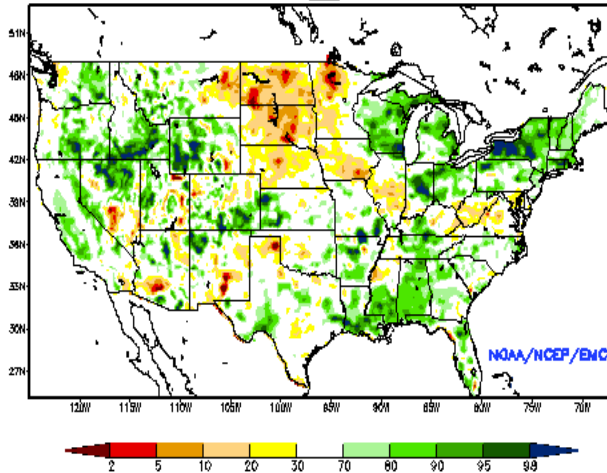
Month

Ensemble-Mean - Past Month Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017

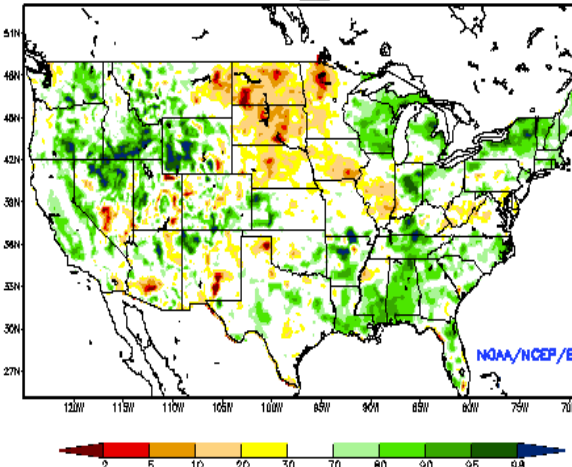


## NLDAS-2.5

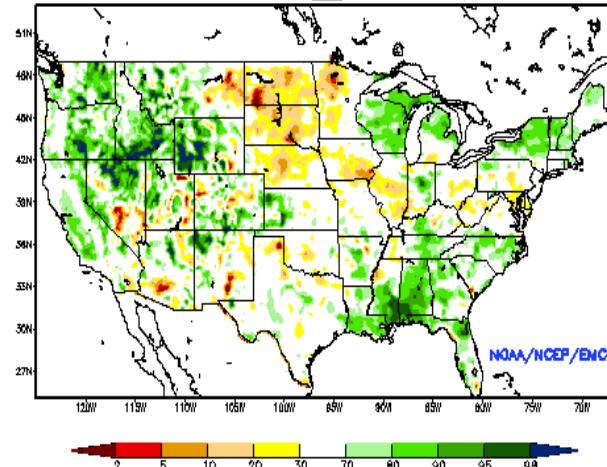
Ensemble-Mean - Current Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017



Ensemble-Mean - Past Week Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017



Ensemble-Mean - Past Month Total Column Soil Moisture Percentile  
NCEP NLDAS Products Valid: JUL 15, 2017





# 15 July 2017 Total Runoff Percentile Comparison

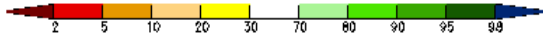
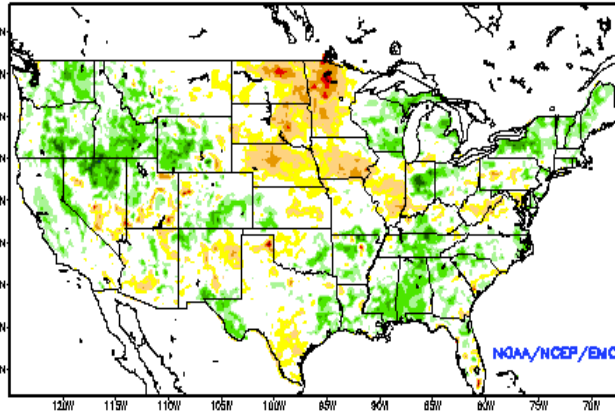
## NLDAS-2

Day

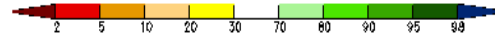
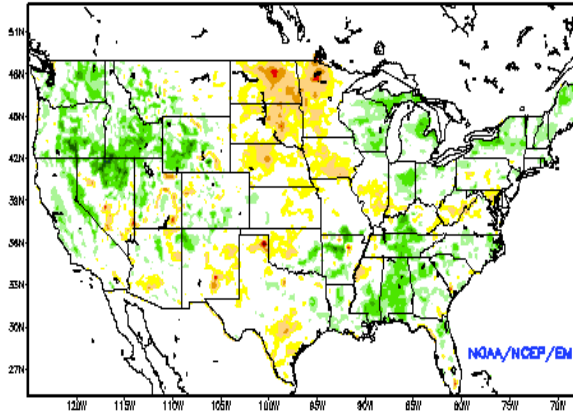
Week

Month

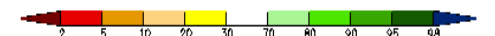
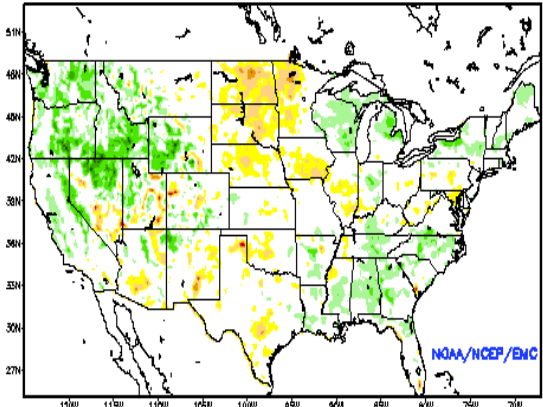
Ensemble-Mean: Current Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017



Ensemble-Mean: Past Week Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017

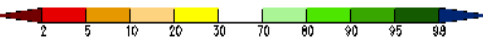
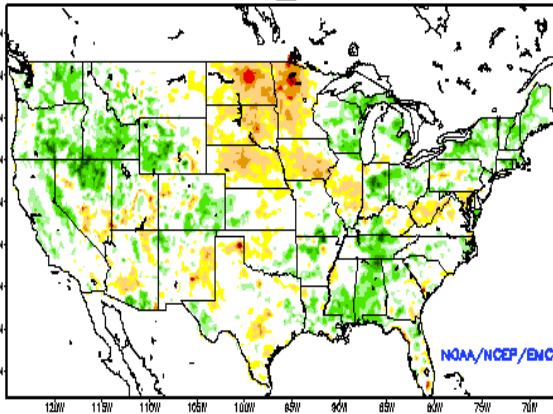


Ensemble-Mean: Past Month Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017

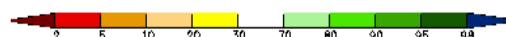
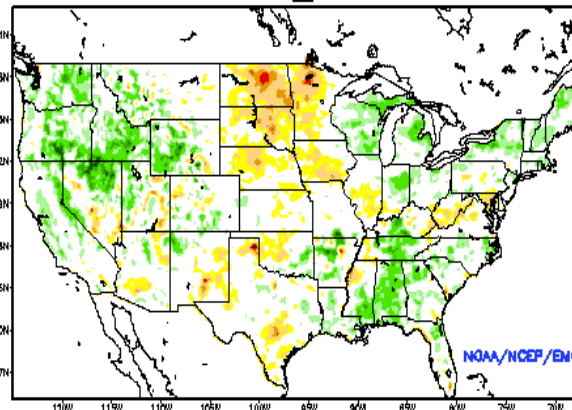


## NLDAS-2.5

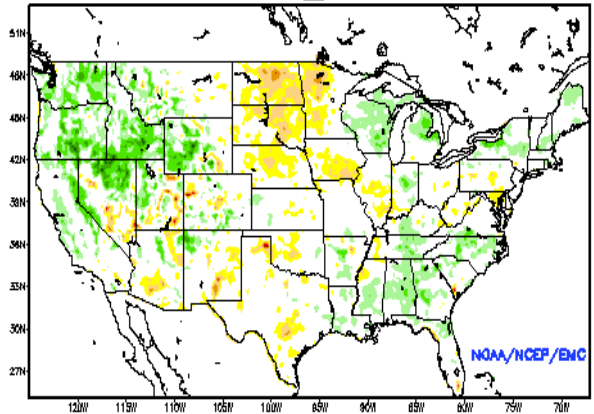
Ensemble-Mean: Current Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017



Ensemble-Mean: Past Week Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017



Ensemble-Mean: Past Month Total Runoff Percentile  
NCEP NLDAS Products\_Valid : JUL 15, 2017



# Summary

**Small difference for daily percentile**

**Few/no difference for weekly and monthly percentile**

# NLDAS-2.5 products – A first look

## 1. NLDAS-2 Drought Monitor

<http://www.emc.ncep.noaa.gov/mmb/nldas/>

## 2. NLDAS-2.5 Experimental Drought Monitor

<http://www.emc.ncep.noaa.gov/mmb/nldas/NLDAS2/>

## 3. NLDAS-2.5 Experimental Data

[ftp://ldas.ncep.noaa.gov/experimental\\_NLDAS2.5/dev](ftp://ldas.ncep.noaa.gov/experimental_NLDAS2.5/dev)

## 4. NLDAS-2.5 Tiff Files for USDM Users

<ftp://ldas.ncep.noaa.gov/tiff/nldas2.5>